

The Justice of Balance: Understanding Intellectual Property from Chinese Historical and Philosophical Perspectives

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**The Justice of Balance:
Understanding Intellectual Property from Chinese
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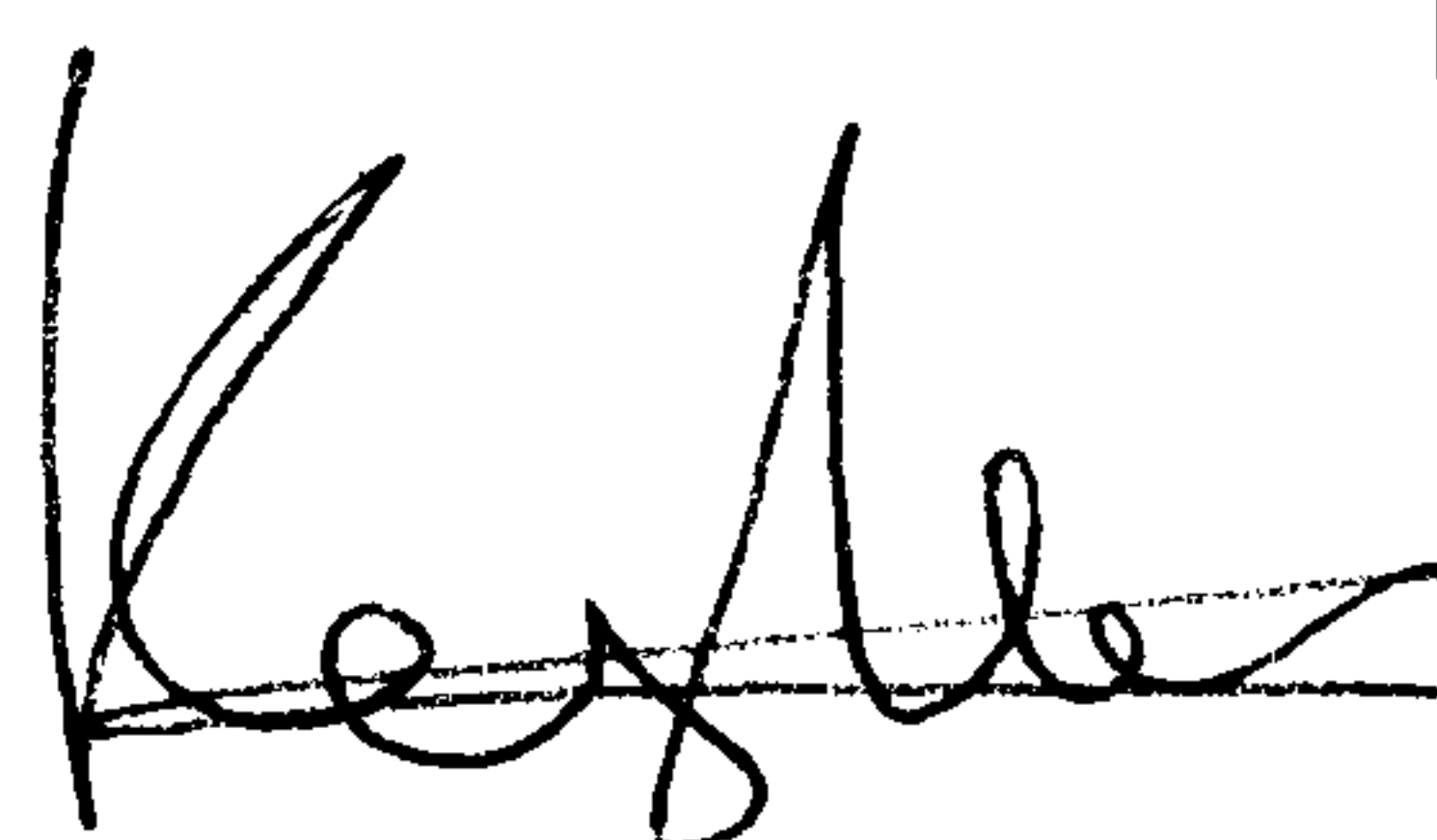
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Thesis submitted for Ph.D. Degree Examination

Spring 2007

This is to declare that the work presented here in this thesis is my own work.

A handwritten signature in black ink, appearing to be 'Ke Shao', written in a cursive style.

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5th December 2006

ABSTRACT

In today's world, intellectual property is widely viewed as a threat to the public interest in using knowledge. As many scholars have argued, a theoretical reason accounting for this phenomenon is that traditional understanding of intellectual property emphasizes strong property rights rather than the public interest. As historical studies have shown, this understanding is fundamentally influenced by the practice of printing monopoly of sixteenth-seventeenth century England, which gave overwhelming attention to appropriation.

This thesis tries to join the above debates by examining the intellectual property history of pre-modern China. Based on the historical inquiry, it further makes several theoretical suggestions to the ongoing development of intellectual property theories.

This thesis argues that intellectual property practice as a tool of stimulating creativity emerged in China when the commercialization of knowledge products made the intellectual property protection a must. A more important finding is that, in a relatively non-monopolistic atmosphere, tremendous efforts were made to effectively disseminate knowledge to enhance the public interest; there existed no obvious conflict between stimulating knowledge creativity and promoting knowledge use.

This thesis then suggests that knowledge creativity and knowledge use are inherently inter-nutritional and inter-conflicting. To promote their reciprocity, it is crucial to keep balance between maximizing knowledge use and stimulating robust knowledge creativity. This thesis further proposes a system containing 'the right of accessing knowledge' and 'the right of deserving reward', in which intellectual property is only a mean to the end and coexists with various alternative models.

This thesis provides a firm theoretical support to the public interest but does not necessarily devalue the importance of knowledge creativity and intellectual property. In many fields, well-designed intellectual property laws must continue to prevail.

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CHAPTER ONE

Introduction: Intellectual Property as a Global Issue and the Role of China

Ownership is ownership is ownership.

– *A Charter of Rights for Creators*, Canada (1985).¹

1.1. The current debates about intellectual property

Intellectual property is an intriguing legal jargon. It combines a wide range of legal institutions with an infinite pool of the most enthralling and energetic symbol of human civilization -- the incredible creative power of human brain. Exclusive rights known as intellectual property rights are often granted to knowledge creators so as to encourage them to produce more knowledge, varying from artistic and literary works to the state-of-the-art technologies that improve and even fundamentally change our lives. In a limited but notably long period, the knowledge creators, who in our modern world are often large global companies, are enabled to effectively control the flow of their knowledge products and prohibit others to use and reproduce them without their consent.

In today's world, intellectual property is also an extremely controversial term. Various schools of thought are critical of the concept of intellectual property and its operation. It is commonly argued that one of the most striking legal phenomena in the past decades has been the inexorable expansion of intellectual property,² especially in the context of the global harmonization of intellectual property laws and the revolutionary changes of high technology. On many aspects, compared with underprotection of knowledge innovations, overprotection is currently viewed as a more serious problem.³ The relevant issues have attracted unprecedentedly fierce debates about the degree to which intellectual property can satisfy various crucial aspects demanded by social justice.

It is widely argued that the expansion and overprotection of intellectual property result in intergenerational bottlenecks in terms of cumulative innovation. For instance, many artistic and literary works are not created because of the difficulty of entering into

¹ Sub-Committee on the Revision of Copyright (Canada), *A Charter of Rights for Creators*, Ottawa: Standing Committee on Communications and Culture, 1985, p. 9.

² Michael A. Carrier, 'Cabining Intellectual Property through a Property Paradigm', 54 *Duke L.J.* 1 (2004), pp. 10-24.

³ Graham M. Dutfield & Uma Suthersanen, 'The Innovation Dilemma: Intellectual Property and the Historical Legacy of Cumulative Creativity', 4 *IP.Q.* 379 (2004), p. 421.

licensing agreements with copyright holders;⁴ in technological fields such as aircraft technology and radio technology, strong patents on components of a system curb many capable inventors to go about their work.⁵ Sometimes the patent position of the big firms makes it almost impossible for new firms to enter the industry.⁶ In contrast, the development in some knowledge-based industries such as semiconductor and computer technology has, arguably, proceeded quite rapidly and effectively in part because the core technologies have not been patented, or have been generally licensed.⁷

The effects of the suffocation of continuous innovation are monopoly, high price, and eventually, impairment to the public interest. The public interest is a cluster of concepts that can be broadly understood as the interests of the consuming public as well as the user-creators such as the creative artists and the manufacturer-producers whose creativities depend on the use of existing knowledge. The international legal framework is said to be not very friendly to the public interest. As the former general counsel for the Office of the United State Trade Representative crisply stated, ‘in fact, the TRIPs Agreement establishes and protects the rights of innovators; it does not include a bill of rights for users of innovation.’⁸

The public interest of the developing countries is most likely to be affected. It is hotly debated that the most immediate side effect of the expansion and overprotection of intellectual property is that it exasperates the gap between the rich and the poor. As the global economy develops, control over knowledge and information, especially those generated from high technology, increasingly determines global wealth and power. Because not all countries participate in the global economy equally, not all of their citizens enjoy its benefits equally and some countries have obvious advantages in producing information and controlling its distribution.⁹

A noteworthy problem in this regard is the accessibilities of knowledge products by the poor. Take an example of the essential drugs such as those needed by the AIDS patients

⁴ Dennis S. Karjala, ‘The Term of Copyright’, in *Growing Pains: Adapting Copyright for Education and Society*, ed. By Laura N. Gasaway, Littleton, Colo.: F.B. Rothman, 1997, p. 33-46.

⁵ Robert P. Merges & Richard R. Nelson, ‘On the Complex Economics of Patent Scope’, 90 *Colum. L. Rev.* 839 (1990), pp. 891-94.

⁶ Fritz Machlup, *The Production and Distribution of Knowledge in the United States*, Princeton: Princeton University Press, 1962, pp. 168-75.

⁷ Merges & Nelson, ‘On the Complex Economics of Patent Scope’, pp. 891-94.

⁸ Judith H. Bello, ‘Some Practical Observations about WTO Settlement of Intellectual Property Disputes’, 37 *Virginia Journal of International Law* 357 (1997), p. 365.

⁹ Jack Balkin, ‘What is Access to Knowledge?’, presented at the ‘Yale Information Society Project Access to Knowledge Conference’, Friday, April 21, 2006. Online at: <http://balkin.blogspot.com/2006/04/what-is-access-to-knowledge.html> (last visited: 5th December 2006).

in Africa.¹⁰ The discussion of this issue may suddenly bring to our mind the sacrifice that the patent holders make -- it seems that they have already dramatically promoted the public interest by making huge efforts to invent the lifesaving drugs and now are required to contribute much more to the poorest by putting themselves in a straitened circumstance.¹¹ However, what will follow if the patent holders *de facto* hinder AIDS patients from enjoying the basic demand of health? For instance, when patent holders are setting the prices of their drugs at artificially inflated levels and patent abuse by drug companies is deterring the provision of medicines to the majority of people in the world,¹² it seems that the issue of patented drugs should be linked with the injustice of the improperly designed intellectual property laws. It is noteworthy that the artificially high price of knowledge products such as drugs, software, movies and books can often be practically reduced. Peter Yu has repeatedly suggested that by producing Chinese versions and making copies in China, costs of DVDs and software can be significantly cut without threatening non-Chinese markets.¹³

Another problem is the possibilities for the developing countries to improve their domestic economy and social welfare by employing well-designed intellectual property laws. It is often argued, largely by economists, that if the developing countries can provide the developed with stronger intellectual property protection, they will get greater linkages to globalization processes and consequently more economic development.¹⁴ This argument does not question whether the existing international intellectual property regime *per se* is good enough for the developing countries but only views it as something that the developing countries must follow.¹⁵ It avoids asking to what extent can the developing countries affordably provide stronger intellectual property protection to satisfy the

¹⁰ The World Health Organization (WHO) defines essential drugs and medicines as 'those drugs that satisfy the health care needs of the majority of the population; they should therefore be available at all times in adequate amounts and in the appropriate dosage forms, and at a price that individuals and the community can afford'. Dr. Hans V. Hogerzeil, 'The Definition and Selection Process for an EDL, Technical Briefing Paper' (27 Oct. 2000) (citing WHO Expert Committee on Essential Drugs, Nov. 1999). Online at <http://www.who.int/medicines/organization/par/edl/trs/trs895.shtml> (last updated Mar. 14, 2002).

¹¹ As Julie Cohen argues, asserting that intellectual property stimulates more new knowledge works and consequently promotes greater public access to them is, after all, the 'whole point' of the proponents of the expansion of intellectual property. Julie E. Cohen, 'Copyright, Commodification, and Culture: Locating the Public Domain', *Public Law & Legal Theory Working Paper Series, Georgetown University Law Center, Working Paper* (No. 663652). Online at <http://ssrn.com/abstract=663652> (Draft 31 Jan 2005), p. 1.

¹² Zackie Achmat, 'We Can Use Compulsory Licensing and Parallel Imports: A South African Case Study', *Aids Law Project*, Online at <http://www.hri.ca/partners/alp/tac/license.shtml> (Nov.-Dec. 1999).

¹³ Peter K. Yu, 'Piracy, Prejudice, and Perspectives: An Attempt to Use Shakespeare to Reconfigure the U.S.-China Intellectual Property Debate', 19 *B.U. Int'l L.J.* (2001), note 313.

¹⁴ Keith E. Maskus, *Intellectual Property Rights in the Global Economy*, Washington DC: Institute for International Economics, 2000, p. 4.

¹⁵ Ke Shao, 'What May Justify Intellectual Property?: Examining the U.S.-China Intellectual Property Disputes through a Historical Inquiry', *Journal of Information, Law and Technology*, Issue 1, 2006, forthcoming.

developed countries and then to get in return greater access to the global market chain controlled by the developed countries.¹⁶

It is widely argued that the standards of intellectual property protection that may be suitable for developed countries may cause greater costs than benefits when applied in developing countries.¹⁷ Although the TRIPs Agreement provides minimum standards to accommodate different situations of different countries, these standards are strong and may be still difficult for some developing countries to cope with.¹⁸ In addition, regional and bilateral agreements that encourage developing countries to adopt higher standards of intellectual property protection beyond the TRIPS can undermine the multilateral system by limiting use of flexibilities and exceptions permitted in the TRIPs and other international treaties.¹⁹

More importantly, a fundamental issue in respect of intellectual property is not whether it promotes trade or attracts foreign investment to combine with the cheap labours of the developing countries.²⁰ Eventually, developing countries will need to develop their own knowledge-based economy and in turn to improve their social welfare by their own intellectual and economic power. However, it is only likely that some developing countries will become greater sources of innovation by developing a closer integration with global sources of technology in accordance with the current international standards of intellectual property protection.²¹ But when? And again, at what costs? ²² Ian Inkster's systematic study of technology transfer shows that the more that intellectual property systems are fine-tuned in advanced systems, the more they operate as barriers to technology transfer into the developing countries. ²³ The TRIPs Agreement may cause a technology gap reinforced by patents, which enables the developed countries' corporations to carry on profiting from first-generation patented technologies in the

¹⁶ Susan K. Sell, *Power and Ideas: North-South Politics of Intellectual Property and Antitrust*, Albany: State University of New York Press, 1998, p. 81.

¹⁷ This view is also reflected in: Commission on Intellectual Property Rights (UK), *Integrating Intellectual Property Rights and Development Policy – Report of the Commission on Intellectual Property Rights*, London September 2002, p. 6. (Hereafter, *Report 2002*) Online at: http://www.iprcommission.org/papers/word/final_report/reportwordfinal.doc (last visited: 25th November 2005).

¹⁸ Maskus, *Intellectual Property Rights in the Global Economy*, p. 1.

¹⁹ Commission on Intellectual Property Rights (UK), *Integrating Intellectual Property Rights and Development Policy – Report of the Commission on Intellectual Property Rights (Executive Summary)*, London September 2002, p. 20. (Hereafter, *Executive Summary*). Online at: http://www.iprcommission.org/papers/word/final_report/execsumwordfinal.doc (last visited: 25th November 2005).

²⁰ *Executive Summary*, p. 4.

²¹ Maskus, *Intellectual Property Rights in the Global Economy*, p. 7.

²² Various examples can be given in this regard. Scientists in developing countries, for instance, may be prevented from gaining access to protected data, or have insufficient resources to do so. *Report 2002*, p. 16.

²³ Ian Inkster, 'Dependencies, Partnerships, and Learning within Patent Systems – Tendencies from Late Development', presented paper at Queen Mary ESRC Intellectual Property Seminars, 1 October 2004.

developing countries even if these have become out-dated in developed markets.²⁴ For companies in the developed countries, the markets in developing countries are often an issue of less or more profits;²⁵ for the later, however, accepting high standards could be an issue of life or death.

Some of the attacks and even animosities to the current expansion of intellectual property may be overreacting and misleading. We should be prudential to say that the developing countries are entirely unable to improve their domestic welfare and knowledge-based economy under the current international intellectual property frameworks. We should also be prudential to assert that, as Lawrence Lessig puts it, balance in intellectual property is over,²⁶ or accept the view that knowledge products should be freely available to all, in no way subject to the control of their creators.²⁷

The key point here is that we need to remove the existing and potential artificial barriers and make things better and more effective. As suggested by the *UK Report of the Commission on Intellectual Property Rights*, there is still a long way to go if we want to use intellectual property laws to help the world meet the targets of reducing poverty, helping to combat disease, improving the health of mothers and children, enhancing access to education and contributing to sustainable development in the developing countries.²⁸ The necessity of intellectual property reforms is a signal for critical study, which shall continue to be the most important task for intellectual property researchers.

1.2. A philosophical-historical perspective of intellectual property

Why have the public interest in general and the interest of developing countries in particular been comparatively neglected? There is an ongoing political explanation arguing that in today's intellectual property policymaking too often the voices of the powerful industries and companies in the developed countries have dominated the

²⁴ Christopher May, *A Global Political Economy of Intellectual Property Rights: The New Enclosures?*, London: Routledge, 2002, pp. 78-79.

²⁵ Assafa Endeshaw, 'A Critical Assessment of the U.S.-China Conflict on Intellectual Property', 6 *Alb. L.J. Sci. & Tech.* 295 (1996), p. 318.

²⁶ Lawrence Lessig, 'The Problem with Patents', *Industry Standard* (23rd April 1999). Online at: http://www.thestandard.com/article/0,1902,4296,00.html?printer_friendly= (last visited: 25th November 2005).

²⁷ This group, as James DeLong put it, might be called the 'anarchists'. James V. DeLong, 'Defending Intellectual Property', in *Copy fights: the future of intellectual property in the information age*, ed. by Adam Thierer and Wayne Crews, Washington, D.C.: Cato Institute, 2002, pp. 17-18.

²⁸ *Report 2002*, p. 1.

changes of intellectual property policies.²⁹ Susan Sell, a renowned expert of international relationships, has illustrated in a very detailed study that the TRIPs Agreement does not equally consider the interest of the developing countries because it is a result of lobbying by twelve powerful CEOs of multinational corporations who wished to mould international law to protect their markets.³⁰ Peter Drahos's five hundred interviews provide further evidence to reveal how a small group of lobbyists and the American national interest wrote the charter for a new global information order and how the interest of the developing countries are deterred.³¹

The fate of the public interest is not a new phenomenon. By examining the nineteenth-century history of patent development, Graham Dutfield points out that patent laws were not merely reformed to solve new problems created by technological advancement. Rather, the politically active roles of powerful industries in promoting the expansion of intellectual property laws at the expense of the public interest were notably determinative.³² This historical route can lead us back to a remoter past. As will be argued later, the threshold of the clever diplomacy of powerful industries started to emerge in the seventeenth-century England.

We may attribute the determinative power of the multinational corporations to their inevitable and strong influences on national interest, economy and decisionmaking. However, the international round table publicly accepts only 'polite' reason and justice rather than aggressive power and force.³³ How do the multinational corporations justify their interests? Why do the voices supporting the interests of knowledge users often find themselves on the defensive?³⁴ To answer these questions, many Western scholars turn to examine the theoretical weapons used by the multinational corporations.

The popularly used theory by the multinational corporations is the Lockean justification of intellectual property. The Lockean theory argues that knowledge is the creation of mental labour and therefore shall be treated as property belonging to the labourer in that every individual has the right to own her own body and in turn her own labour and its

²⁹ *Report 2002*, p.8.

³⁰ Susan K. Sell, *Private Power, Public Law: the Globalization of Intellectual Property Rights*, Cambridge: Cambridge University Press, 2003, p. 2.

³¹ Peter Drahos with John Braithwaite, *Information Feudalism: Who Owns the Knowledge Economy?*, Oxford: Oxford University Press, 2003. Also see Assafa Endeshaw, 'The Paradox of Intellectual Property Lawmaking in the New Millennium: Universal Templates as Terms of Surrender for Non-Industrial Nations; Piracy as an Offshoot', 10 *Cardozo J. Int'l & Comp. L.* 47 (2002), p. 74.

³² Graham Dutfield, *Intellectual Property Rights and the Life Science Industries: A Twentieth Century History*, Burlington, VT: Ashgate Publishing Company, 2003, p. 9; p. 237.

³³ The term 'polite' is borrowed from Samuel Oddi. See A. Samuel Oddi, 'TRIPS - Natural Rights and a "Polite Form of Economic Imperialism"', 29 *Vand. J. Transnat'l L.* 415 (1996).

³⁴ Jessica Litman, 'The Public Domain', 39 *Emory L.J.* 965, (1990), p.995.

fruits. Morally speaking, the property right of the labourer is a natural right and cannot be deprived unjustly by any legal institution or political power.³⁵ Although Lockean theory puts several limits to property rights, it usually ends up as a strong defence of intellectual property maximalism because the initial intention of Locke is to underpin individual rights rather than the public interest.³⁶

Samuel Oddi has indicated a fact that Lockean theory was submitted to have played a major rhetorical role in the strategy of industry groups dominated by multinational corporations to convince their governments in developed countries to demand ‘adequate’ protection of intellectual property.³⁷ The moral power of Lockean theory is often incredible. Lessig gives a vivid example: when discussing the price of AIDS drugs in Africa, there is a fear of the grandstanding US politicians who would call the presidents of the drug companies before a Senate or House hearing, and ask, ‘How is it you can sell this HIV drug in Africa for only \$1 a pill, but the same drug would cost an American \$1,500?’; because the idea that property should be sacred is deeply rooted, it is difficult to get a ‘sound bite’ answer to that question and therefore the price cannot be reduced.³⁸

In addition to Lockean theory, modern Anglo-American systems of intellectual property are easily modelled as rule-utilitarian.³⁹ The rule-utilitarian argument views knowledge as non-rivalrous and non-excludable. Non-rivalry means that knowledge can be used by an infinite number of people in an infinite number of ways without harming the use value of any other person. This in turn results in the problem of non-excludability, which means people cannot practically be excluded from obtaining and reproducing knowledge. The rule-utilitarian argument therefore suggests that in the context of commercialization of knowledge products, the non-rival and non-excludable nature of the intangible knowledge will result in market failure because the pirates can use significantly lower costs to reproduce the knowledge products created by others; thus, to provide incentive for creativity, exclusive rights known as intellectual property rights must be granted.⁴⁰

The rule-utilitarian argument or incentive theory is the strongest and most widely appealed to justification for intellectual property. A standard and unquestioned

³⁵ For more detailed analysis, see Chapter Seven.

³⁶ Linda R. Cohen & Roger G. Noll, ‘Intellectual Property, Antitrust and the New Economy’, 62 *U. Pitt. L. Rev.* 453 (2001), p. 456. For more detailed analysis, see Chapter Seven.

³⁷ Oddi, ‘TRIPS - Natural Rights and a “Polite Form of Economic Imperialism”’, p. 432.

³⁸ Lawrence Lessig, *Free culture: how big media uses technology and the law to lock down culture and control creativity*, New York: Penguin Press, 2004, pp. 260-61.

³⁹ Adam D. Moore, ‘A Lockean Theory of Intellectual Property’, 21 *Hamline L. Rev.* 65 (1997), p. 66. Neil Weinstock, ‘Copyright and a Democratic Civil Society’, 106 *Yale Law Journal* 283 (1996), p. 307.

⁴⁰ For more details, please see Chapter Eight.

assumption is that *only* by intellectual property rights can knowledge creativity be stimulated.⁴¹ The multinational corporations and their lobbyists widely believe that all intellectual property rights are good for business, benefit the public at large and act as catalysts for technical innovations and, therefore, more intellectual property rights must be better.⁴² Although the rule-utilitarian argument starts out as a basis for strictly limiting the assignment of property rights, in the end, it *de facto* becomes a vehicle to justify their proliferation and expansion throughout the centuries.⁴³

It is noteworthy that the rule-utilitarian argument is often used together with the Lockean theory, despite the fact that they largely counter with each other. Over time, legislators tended to conflate incentive-based and natural law theory in the attempt to justify the broadening of the intellectual property protection.⁴⁴ Reasons may be complex but it seems that incentive theory may strike judges as particularly salient in developing an undercurrent of moral desert justification. One is the aspect of talent; the other aspect is that of cost.⁴⁵

Using the term 'property' to describe intellectual property conveys the impression that they are fundamentally 'like' interests in land or tangible personal property -- and should be protected with the same generous panoply of remedies.⁴⁶ As a Canadian government report on the revision of copyright articulates, 'ownership is ownership is ownership. The copyright owner owns the intellectual works in the same sense as the landowner owns land.'⁴⁷ The shift in terminology towards 'intellectual property' has resulted in a shift away from thinking about intellectual property laws as specific legal instruments designed to promote the public interest.

Why does our thinking always begin with 'property' when discussing knowledge products? It seems that a better understanding of this question requires a scrutinization of the historical roots of the advent of Lockean theory of intellectual property because as Edward Said articulated, no production of knowledge in the human sciences can ever

⁴¹ Ruth Gana Okediji, 'Perspectives on Globalization from Developing States: Copyright and Public Welfare in Global Perspective', 7 *Ind. J. Global Leg. Stud.* 117 (1999), p.155.

⁴² *Report 2002, Forward*, p. v.

⁴³ Stephen Breyer, 'The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs', 84 *Harv. L. Rev.* 281 (1970) p. 324.

⁴⁴ Diane Leenheer Zimmerman, 'Information as Speech, Information as Goods: Some Thoughts on Marketplaces and the Bill of Rights', 33 *Wm and Mary L. Rev.* 665 (1992), pp. 690-703.

⁴⁵ Jeremy Waldron, 'From Authors to Copiers: Individual Rights and Social Values in Intellectual Property', 68 *Chi.-Kent. L. Rev.* 842 (1993), pp. 852-53.

⁴⁶ William Fisher, 'The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States', in *Eigentum im internationalen Vergleich*, Vandenhoeck & Ruprecht, 1999, p. 287.

⁴⁷ Sub-Committee on the Revision of Copyright, *A Charter of Rights for Creators*, p. 9.

ignore or disclaim the author's involvement as a human subject in his own circumstance.⁴⁸

For a long time, in classic studies of the birth of the modern author, the emergence of intellectual property laws is only romantically understood as the rise of several historical phenomena such as individualism and even Protestantism.⁴⁹ However, as John Feather, Mark Rose, Carla Hesse and some others have well demonstrated, the trajectory of our modern understanding of intellectual property is *de facto* carved by the practice of English and French printing guilds during the middle sixteenth and early eighteenth centuries.⁵⁰ Since the middle sixteenth century, due to the demand of rigorous political and religious censorship, the English printing guild known as London Stationers' Company had gained absolute monopoly power in publishing industry. When their power was about to be demolished in the early eighteenth century, the publishers actively used the contemporary fashion of Lockean theory, which itself was deeply influenced by the then scientific discovery of Newtonian atomistic physics, to justify their interests. Although after the complicated progress of petitions and rejections copyright provided by the Statute of Anne (1710) was eventually limited by term, politicians and jurists involved had been deeply influenced by Locke's logic. The public interest continues to be supported but the centre of understanding intellectual property has since then been constructed mainly by the notion of property.⁵¹ Even in the domain of intellectual property today, the understanding of intellectual works has to a certain degree remained what it was in eighteenth-century England.⁵²

Assuming that the particularities of sixteenth-eighteenth century England did not influence our modern understanding of intellectual property practice, we may have developed different types of theories. For instance, the 'social planning theory' proposed by William Fisher, Neil Netanel, Keith Aoki, Rosemary Coombe and some others, although less well established and recognized, is rooted in the proposition that intellectual property rights can and should be shaped so as to help foster the achievement of a just and

⁴⁸ Simon Leys, *The Burning Forest: Essays on Chinese Culture and Politics*, London: Paladin Grafton Books, 1988, p.96.

⁴⁹ David Saunders has criticized the romantic view. David Saunders, *Authorship and Copyright*, London: Routledge, 1992, p. 1.

⁵⁰ John Feather, *A History of British Publishing*, London: Routledge, 1988. Mark Rose, *Authors and Owners: The Invention of Copyright*, London: Harvard University Press, 1993. Carla Hesse, *Publishing and Cultural Politics in Revolutionary Paris, 1789-1810*, California: University of California Press, 1991.

⁵¹ For a detailed discussion, please see Chapter Seven.

⁵² Peter Jaszi, 'Toward a Theory of Copyright: the Metamorphoses of "Authorship"', 41 *Duke L.J.* 455 (1991), p.500.

attractive culture.⁵³ This approach inclines to view intellectual property as an instrument. Unfortunately, history cannot be assumed; during the childhood of the development of intellectual property, some particular historical events accidentally and even hastily manufactured an intellectual property theory for strong natural rights, leaving other fundamentally and equally important issues such as the interests of knowledge users comparatively ignored.

1.3. The role of China?

The above prologue has provided an overall picture of the current critiques on the merits of intellectual property and the philosophical and historical accounts behind them. To add lustre to those debates, it sounds intriguing to examine history and culture of non-European regions to see if diverse inspirations can be drawn to add to the current debates. How about China?

It seems to be not really necessary to seriously consider the experiences or lessons of the developing countries as the Western society has for a long time viewed the developing countries as a blank form in which historically and culturally no intellectual property notion and practice has been filled in. In addition to a fact that the developing countries normally lack enough intellectual property experts to join the international conversations, this impression may explain why the voice of the developing countries often cries at the corner of the international round table.⁵⁴

In contrast, European intellectual property history is said to be unique and informative. As the above has mentioned, some take a romantic perspective of intellectual property, viewing authors as individual geniuses who should have strong and sacred intellectual property rights; others have provided ample evidence to refute the romantic view, inclining to interpret intellectual property as a result of guild monopolistic practice and

⁵³ William Fisher, 'Theories of Intellectual Property', in *New Essays in the Legal and Political Theory of Property*, ed. by S. Munzer, Cambridge: Cambridge University Press, 2000, pp. 168-200. Also see, e.g., Neil Weinstock Netanel, 'Copyright and a Democratic Civil Society', 106 *Yale Law Journal* (1996), p. 283. Rosemary J. Coombe, 'Objects of Property and Subjects of Politics: Intellectual Property Laws and Democratic Dialogue', 69 *Texas Law Review* (1991), p. 1853. Niva Elkin-Koren, 'Copyright Law and Social Dialogue on the Information Superhighway: The Case against Copyright Liability of Bulletin Board Operators', 13 *Cardozo Arts & Entertainment Law Journal* (1995), p. 345. Michael Madow, 'Private Ownership of Public Image: Popular Culture and Publicity Rights', 81 *California Law Review* (1993), p. 125. William Fisher, 'Reconstructing the Fair Use Doctrine', 101 *Harvard Law Review* (1988), pp. 1659-795; pp. 1744-94.

⁵⁴ Shao, 'What May Justify Intellectual Property?', forthcoming.

even something evil by nature. These views are used to either support or oppose intellectual property.

In respect of China, Western scholars may not be interested in further exploring the so-called inspiration from Chinese history because Professor William Alford, a distinguished expert of Chinese law, has already provided an answer in his masterpiece *To Steal a Book is an Elegant Offense*. As he argues, the notion of intellectual property was politically and culturally unable to germinate in pre-modern China due to the brutal political control over publishing and the Confucian enthusiasm towards imitation.⁵⁵

Alford's argument has inspired researchers widely, albeit differently. Except a few who view culture as incompatible and try to argue that intellectual property is entirely a Western phenomenon and therefore is not a universally justified value,⁵⁶ the majority of commentators use Alford's arguments to condemn contemporary China's rampant piracy industry. Their logic is rather simple: the evil of Chinese pirates has deep historical roots because traditionally the Chinese did not view 'stealing books' as shameful.⁵⁷ These widely appeared comments often cause people to fly into a temper. The conclusion that Glenn Butterson has reached is quite representative:

[I]f residues of Confucianism and xenophobia do linger in the contemporary Chinese sensibility, how do they dovetail with modern foreign efforts to bring Chinese intellectual property practices up to *world* standards?⁵⁸

⁵⁵ William P. Alford, *To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization*, California: Stanford University Press, 1995. This book collects Alford's several previously published journal papers. The book name borrows a trite saying of Kong Yi-ji, a fictive character created by Lu Xun (1881-1936), who was famous for his misunderstanding and fierce and irrational attack on Chinese traditional culture. Alford seems to be familiar with Lu Xun's literature which may be popular along western Sinologists.

⁵⁶ Carla Hesse, 'The Rise of Intellectual Property, 700 B.C. – A.D. 2000: an Idea in the Balance', *Dædalus* (Spring 2002), pp.26-27; Peter Drahos, *A Philosophy of Intellectual Property*, Aldershot: Dartmouth, 1996, p. 15.

⁵⁷ The following comment is rather popular: 'The Chinese esthetic preference for imitation is difficult to reconcile with the Berne Convention's prohibition of illegitimate reproduction and respect for innovation.' Susan Tiefenbrun, 'A Hermeneutic Methodology and How Pirates Read and Misread the Berne Convention', 17 *Wis. Int'l L.J.* (1999), p. 22. Similar examples are extensive. See, e.g., Daniel Burkitt, 'Intellectual property Copyrighting culture-the History and Cultural Specificity of the Western Model of Copyright', 2 *I.P.Q.* 146 (2001). Richard E. Vaughan, 'Defining Terms in the Intellectual Property Protection Debate: Are the North and South Arguing Past Each Other When We Say 'Property'? A Lockean, Confucian, and Islamic Comparison', 2 *ILSA J Int'l & Comp L*, 307 (1996). Michael Yeh, 'Up Against a Great Wall: The Fight against Intellectual Property Piracy in China', 5 *Minn. J. Global Trade* 512 (1996). Glenn R. Butterson, 'Pirates, Dragons and U.S. Intellectual Property Rights in China: Problems and Prospects of Chinese Enforcement', 38 *Ariz. L. Rev.* 1081 (1996). Kenyon S. Jenckes, 'Protection of Foreign Copyrights in China: The Intellectual Property Courts and Alternative Avenues of Protection', 5 *S. Cal. Interdis. L.J.*, 553 (1997). Angela Mia Beam, 'Piracy of American Intellectual Property in China', 4 *D.C.L. J. Int'l L. & Prac.*, 337 (1995).

⁵⁸ Glenn R. Butterson, 'The Empire Strikes Back: Piracy with Chinese Characteristics: To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization', 81 *Cornell L. Rev.* 1129 (1996), p. 1133.

Alford's primary intention of labeling China as 'alien' to intellectual property is to condemn the US trade sanction policy frequently applied to the US-China copyright disputes.⁵⁹ He urges the US government to understand China's unfamiliarity with intellectual property and alter from sanction to friendly negotiation.⁶⁰ Alford's readers, however, run counter to his desperate desire.⁶¹

The consequence of Alford's approach, whatsoever has been used, is that it has potentially promoted the US to actively play a role of 'missionary' in China, lobbying the Chinese with the present American understanding of intellectual property, which leans to protecting its dominant industries across the world. Repeatedly it has been suggested that the US non-governmental organizations (NGOs) shall interfere by changing the intellectual property landscape in China.⁶² Two American NGOs, the International Intellectual Property Alliance (IIPA) and the Business Software Alliance (BSA), have taken a dedicated interest in China⁶³ and lobbied quite successfully.⁶⁴ Their activities even influenced a potentially dangerous change of China's new software regulation in 2002, which put threats on fair dealing of individual end-users and had a potential danger of lifting China up to a level of overprotection that even the US would be unwilling to reach.⁶⁵

The US strategy of cultural and moral condemnation often distracts public opinion from the economic imbalance inherent to the intellectual property disputes to morally blaming the evil Chinese pirates. Although many piracy workshops must be effectively ceased, we cannot ignore the economic fact that, as reported by over half of China's surveyed software companies, the primary reason that software is pirated in China is because

⁵⁹ Ke Shao, 'Alien to Copyright?: A Reconsideration of the Chinese Historical Episodes of Copyright', 4 *Intellectual Property Quarterly*, London: Sweet & Maxwell, 2005, pp. 400-31.

⁶⁰ Alford heavily criticized the U.S. foreign policy. William P. Alford, 'Making the Word Safe for What? Intellectual Property Rights, Human Rights, and Foreign Economic Policy in the Post-European Cold War World', 29 *N.Y.U.J. Int'l L. & Pol.* 135 (1996-97).

⁶¹ There is another aspect that Alford's readers have misunderstood. Alford reminds us several times that originality did exist in Chinese literature and art, although he is very reluctant to say so and inclines to overemphasize the significance of the past. Alford, *To Steak a Book*, p. 26; 27; 29. The significance of Alford's argument, as I apprehend it, is that the effect of the past on imitation and replication may imply the importance of the past knowledge in the progress of cumulative creativity and the freedom of using an intellectual common that individuals shall enjoy without the obstacles of copyright law. But most readers of Alford's book only superficially assume that in China knowledge is merely transmitted from the past. Ke Shao, 'Alien to Copyright?', p. 412.

⁶² For a systematic one, see Serri E. Miller, 'The Posse is Coming to Town . . . Maybe: The Role of United States Non-Governmental Organizations in Software Anti-Piracy Initiatives as China Seeks WTO Accession', 7 *ILSA J Int'l & Comp L* 111 (2000).

⁶³ *Ibid.*, p. 131.

⁶⁴ For a criticism on the BSA's lobbying and exaggeration in China and its strong influence on the Chinese Software Association (CSA), see Xiang Jian-xin, 'Exaggerating China's Piracy Rate: What Role is the BSA Playing?', *BlogChina*, online at: <http://www.blogchina.com/new/display/6711.html> (last visited: 29th October 2005).

⁶⁵ Shao, 'What May Justify Intellectual Property?', forthcoming.

consumers do not have enough income to purchase legal copies.⁶⁶ It is very difficult for an individual to spend a considerable part of her salary to buy a single copy of software.⁶⁷ Even if that person could afford such a product, she might not be interested in doing so.⁶⁸

It is noteworthy that Alford did not use all the available historical data to support his arguments. He only fully cited one copyright record in his book, overlooking other more detailed records.⁶⁹ Lacking a vivid picture of pre-modern China's copyright history, he applies Eurocentric perspectives to analyze why China had not generated a notion of intellectual property: he views China's political culture and intellectual atmosphere marinated in Confucianism as naturally hostile to intellectual property notions.⁷⁰

In addition, Alford's understanding of intellectual property is fundamentally influenced by the romantic view of authorship. He highly praises Martha Woodmansee who, as he says, 'adopted her thesis that copyright is an outgrowth of the romantic conception of the author as an inspired genius whose creativity should be seen as individual'.⁷¹ Alford further maintains:

[T]he seventeenth and eighteenth centuries witnessed the development of an approach toward intellectual property in Europe that had no counterpart in imperial Chinese history. *Simply* stated, there developed in England and on the Continent the notion that authors and inventors had a property interest in their creations that could be defended against the *state*. Society, growing numbers of Europeans came to believe, would benefit by providing incentives to engage in such work and disseminate the results.⁷²

It seems that Alford is not aware of the fact that the thesis of romantic authorship has lost favour within academic circles of intellectual property and literary criticism.⁷³ He is not

⁶⁶ PricewaterhouseCoopers, *Contribution of the Software Industry to the Chinese Economy - a Study Conducted by PricewaterhouseCoopers*, Commissioned by the Business Software Alliance 1 (1998), p. 28.

⁶⁷ Michael P. Ryan, *Knowledge Diplomacy: Global Competition and the Politics of Intellectual Property*, Washington, D.C.: Brookings Institution Press, 1998, p. 80.

⁶⁸ Peter Yu, 'From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-first Century', 50 *Am. U. L. Rev.* 131 (2000), p. 176.

⁶⁹ It reads: [T]his book has been printed by the family of Secretary Cheng of Meishan[in Sichuan]. We have petitioned (*sheng*) to the government therefore no one is permitted to reprint it. Alford, *To Steal a Book*, p. 14. For the Photocopy of the original colophon, see Zhou Lin & Li Ming-shan, *Zhongguo banquan shi yanjiu wenxian* (*Historical Materials for the Studies of China's Copyright History*), Beijing: Zhongguo Fangzheng, 1999, p. 2.

⁷⁰ For methodological issues, see Chapter Two.

⁷¹ Alford, *To Steal a Book*, footnote 63, p. 137.

⁷² Alford, *To Steal a Book*, pp. 18-19.

⁷³ Diane Conley, 'Author, User, Scholar, Thief: Fair Use and Unpublished Works', 9 *Cardozo Arts & Entertainment Law Journal*, 15 (1990), p. 21.

interested in Patterson and Rose, who appeared in his bibliography.⁷⁴ He fails to realize that Patterson's praiseworthy work is not a mere 'historical narrative';⁷⁵ behind that, there lies his insight into the necessity of dispelling the illusion of the sacred intellectual property and its serious side effects. In addition, Alford does not offer spaces for other erudite scholars such as Hesse, Feather and Saunders, who have provided very detailed examinations of European copyright history and eloquently refuted the romantic view of authorship.⁷⁶

Many Chinese scholars have adopted a similar approach. In addition to those who mainly repeat Alford's views,⁷⁷ some others ideologically attribute China's failure of spontaneously developing modern intellectual property laws to pre-modern China's political and legal obscurantism and even speciously to the ban on book trading between China and other nomadic states in medieval times.⁷⁸ One Chinese scholar, while having no knowledge about the ample historical resources provided by Western scholars, even construes the advent of copyright as a direct result of English mercantilism.⁷⁹

The most erudite Chinese scholar of intellectual property, Zheng Cheng-si, disagrees with Alford by suggesting the existence of copyright cases in thirteenth-century China.⁸⁰ Peter Yu has argued that studies of China's intellectual property history are 'fragmentary and misleading'.⁸¹ In addition, Jonathan Ocko has doubted the absoluteness of Alford's opinion as follows: 'I would argue, even if one cannot find it inscribed in codes or litigated in courts, an intellectual property rights consciousness, or sensibility, has

⁷⁴ Lyman Ray Patterson, *Copyright in Historical Perspective*, Nashville: Vanderbilt University Press, 1968. Rose, *Authors and Owners*.

⁷⁵ Alford, *To Steal a Book*, p. 19.

⁷⁶ Feather, *A History of British Publishing*. Hesse, *Publishing and Cultural Politics in Revolutionary Paris*. Saunders, *Authorship and Copyright*.

⁷⁷ Cui Li-hong, 'Xian Qin rujia wenhua yu zhishi chanquan falü (Pre-Qin Confucian Culture and Intellectual Property Laws)', 15 *Zhoungguo yantai daxue xuebao (China Yantai University Journal)* 26 (2001). Li Ya-hong, 'Xifa zhongyi de wenhua kunhuo -- toushu busuan tou: Zhonghua wenming zhong de zhishi chanquan fa (The Cultural Perplexity of Transplanting Western Laws into China -- To Steal a Book is not Stealing: Intellectual Property Laws in Chinese Civilization)', 6 *Zhongwai faxue (Peking University Law Journal)* 110 (1998).

⁷⁸ For instance, see Wu Han-dong & Wang Yi, 'Zhongguo chuantong wenhua yu zhuzuoquan zhidu luelun (A Brief Comment on Chinese Traditional Culture and the System of Author's Right)', 4 *Faxue yanjiu (CASS Journal of Law)* 18 (1994); Liwei Wang, 'The Chinese Traditions Inimical to the Patent Law', 14 *NW. J. INT'L L. & BUS.* 15 (1993).

⁷⁹ Wang Fei, 'Chuantong sixiang yu zhuzuoquan zhidu de chansheng (Traditional Culture and the Origin of the System of Author's Rights)', 2 *Zhuzuoquan (Author's Rights)* 59 (1998).

⁸⁰ Zheng Cheng-si, 'Zhishi canquan de qiyuan (The Origin of Intellectual Property)', *Institute of Law of the Chinese Academy of Social Sciences*, online at <http://www.iolaw.org.cn/shownews.asp?id=6757> (last visited 5th December 2006).

⁸¹ Yu, 'From Pirates to Partners', p. 304.

probably existed in China for a long time.’⁸² However, these are minority comments and are brief.

In sum, China is currently viewed as playing a negative role in recognizing intellectual property and is largely excluded from the relevant conversations. The conflicts between China and the US are culturally difficult to be reduced. Under this background, how can we expect a friendlier environment in which China is likely to be more helpful?

1.4. The research questions

The above discussions have provided a background of the current debates on intellectual property issues and China’s role in the relevant global discourses. At present, intellectual property is widely viewed as a danger to the public interest. A theoretical reason accounting for the unreasonable expansion and overprotection of intellectual property is that traditional intellectual property theories such as Lockean theory and incentive theory put more emphasis on appropriation than on the public interest in using knowledge. This phenomenon, as has been commonly argued, is rooted in the historical particularities of sixteenth-eighteenth century Europe where guild monopoly had played a fundamental role in shaping our modern understanding of intellectual property.

It may be useful to examine non-European history and culture to see if diverse inspirations can be drawn to contribute to the current debates on intellectual property. However, China is widely viewed as traditionally having no notion of intellectual property and therefore being unable to provide good examples.

Based on the above discussions, this thesis analyzes three questions:

- Can we have a better understanding of pre-modern China’s intellectual property history and the relevant issues?
- What can be added to the current understanding of Lockean intellectual property theory from a re-examination of pre-modern China’s intellectual property history?

⁸² Jonathan Ocko, ‘Copying, Culture, and Control: Chinese Intellectual Property Law in Historical Context’, 8 *Yale J. L. & Human* 559 (1996), pp. 569-72. Anna Han also criticized Alford’s book. However, she remains silent on Confucianism probably because she feels that she is not an expert to speak on this issue. Anna M. Han, ‘To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization’, 36 *Santa Clara L. Rev.* 1265 (1996).

- Based on the re-examination of history, can we develop some new perspectives on intellectual property theories, especially by using some elements of Chinese philosophy?

1.5. Terminologies

Several terms that are going to be frequently used in the following chapters deserve clear definitions.

Intellectual property and proto-intellectual property

A universal definition of intellectual property might begin by identifying it as non-physical property whose value is based upon some idea or ideas. Furthermore, there must be some additional element of novelty.⁸³ The holder of intellectual property is entitled to exercise various exclusive rights in relation to the subject matter of the intellectual property. The most popular varieties of intellectual property are copyright, trademark and patent. Proto-intellectual property is frequently called intellectual property in this thesis.

This thesis defines pre-modern intellectual property as proto-intellectual property and includes it in the catalogue of intellectual property. The fundamental common ground of proto-intellectual property and modern intellectual property is that both of them understand the effective function of exclusive rights in establishing a healthy market order under which the commercialized knowledge products can flourish. Applying every detail of modern concepts to study history often results in simplism and uninterpretability. Sometimes we need to use a loose definition, as Alfred Simpson did when analyzing the ancient notion of contract, to look for the links between the past and the present.⁸⁴

Knowledge creator

Knowledge creators are easily understood as individual authors or inventors. However, they also include investors who financially support the creation of new knowledge.

⁸³ Justin Hughes, 'The Philosophy of Intellectual Property', 77 *Geo. L.J.* 287 (1988), p. 294.

⁸⁴ Alfred William Brian Simpson, *A History of the Common Law of Contract*, Oxford: Clarendon Press, 1975, pp. 5-6.

Therefore, companies and employers engaging in investing creativity shall also be classified as knowledge creators.⁸⁵

Creativity and newness

Creativity means the ability to create. In the copyright field, it is often understood as originality while in the patent field, it is often presented as innovation. Trademark also involves creativity, which requires a trademark to be uniquely distinctive and different to others. All variants of creativity have a common character: bringing new knowledge to our society. The notion of newness however varies, depending on the degree to which knowledge is created. For instance, in copyright, the requirement of newness is that the work is created independently, a requirement that is much lower than that in the patent field.

The public interest and the knowledge user

The concept of the public is often not clearly defined. As far as intellectual property is concerned, the public obviously is a concept opposite to the present intellectual property owners and therefore is equal to the knowledge users. In this regard, the public interest can be broadly understood as the interests of the consuming public and the user-creators such as the creative artists and the manufacturer-producers whose creativities depend on the use of existing knowledge.⁸⁶

Knowledge dissemination, the use of knowledge, and access to knowledge

These three concepts frequently appear in this thesis. Knowledge dissemination means the distribution of knowledge, in particular newly created knowledge, in our society. The purpose of knowledge dissemination is to enable the public to use knowledge. Because the degree to which the public can use knowledge is subject to the accessibility of knowledge, knowledge must be effectively disseminated. The meanings of these three concepts are interconnected and are largely the same.

Knowledge management systems

⁸⁵ Uma Suthersanen, 'Towards an International Public Interest Rule?: Human Rights and International Copyright Law', in *Copyright and Free Speech: Comparative and International Analyses*, ed. by Jonathan Griffiths & Uma Suthersanen, Oxford University Press, 2005, p. 111.

⁸⁶ Krasilovsky defines the public as 'the manufacturer-producer...the creative artist...[and] the consuming public...'. William Krasilovsky, 'Observations on Public Domain', 14 *Bull. Copyright Soc'y* 205 (1967), p. 213.

This term is created by this thesis to interpret various systems that are able to promote knowledge creativity and access to knowledge. It includes intellectual property and other alternative models such as governmental reward, free software, and systems based on contract and compensation.

1.6. Scope and limitations

The scarcity of historical data with respect to proto-intellectual property practice in pre-modern China, in particular the legal attitude towards it, is the initial difficulty faced by this thesis. In the field of copyright research, except several copyright decrees recoded by the late Qing bibliophile Ye De-hui (1864-1927),⁸⁷ there is not much immediate information available. As for trademark, there are only several legal cases, which are mainly recorded in several seventeenth-eighteenth century epigraphs found in the commercially and industrially developed lower Yangtze River region.⁸⁸ Records about the legal attitudes towards technical secrets or patented technologies are extremely scant.⁸⁹

However, to a certain degree, overcoming this problem is likely. If we put the above-mentioned historical data into the context of pre-modern China's development of its commerce, publishing industry and technological innovations, where information is ample, we will be able to archaeologically reconstruct the 'ruins' of pre-modern China's intellectual property practice. In addition, several methodologies that are going to be elaborated on in Chapter Two will also be very helpful to our understanding of the matter.

Notwithstanding the possibility of reconstruction, the scarcity of information makes it difficult to tell to what degree has pre-modern China's intellectual property practice promoted China's social progress. This thesis does not prepare to examine this teleological question but only focuses on the phenomenological aspects of pre-modern China's intellectual property practice -- why did it happen and develop, and more importantly, how can experience and lessons be gleaned. It is mainly an examination of

⁸⁷ Ye De-hui, *Shulin qinghua*, For its records, see Zhou & Li, *Historical Materials for the Studies of China's Copyright History*.

⁸⁸ The main sources are: *Ming Qing Suzhou gongshangye beike ji* (*Collection of Suzhou's Industrial and Commercial Epigraph in the Ming and Qing Dynasty*), ed. by Suzhou History Museum, History Department of Jiangsu Normal College and Institute of Ming and Qing History of Nanjing University, Nanjing: Jiangsu renmin, 1981. *Shanghai beike ziliao xuanji* (*Selected Collection of the Epigraphs in Shanghai*), ed. by Shanghai Museum, Shanghai: Shanghai renmin, 1980.

⁸⁹ A few can be seen from the above-mentioned epigraphs.

ideas, thoughts and philosophies reflected in China's proto-intellectual property practice rather than its institutions, systems and effects, although the latter will be mentioned and applied to support the former.

In addition, according to the findings of this thesis, although hypothetically it is possible that China would be able to enter an evolutionary progress of modern intellectual property laws had China not been affected by the coming of Western power, this thesis will not answer the question of why China failed to spontaneously develop these laws when England began to do so. This question is as complicated as several old enigmas, which ask why China failed to independently generate capitalism, modern scientific theories or industrial revolution.⁹⁰ Even in the studies of economic history where the relevant data is sufficient, these enigmas remain in dispute.⁹¹

The last thing to note is that the philosophical constructions made in this thesis mainly apply to copyright, patent and some other forms of intellectual property. Trademark may from time to time be relevant; however, because it is less associated with knowledge creativity and dissemination, the criticism of it is largely different from those of copyright and patent.

1.7. Outline of this thesis

Chapter One provides an introduction to this thesis. It serves as a background to the current debates on intellectual property and China's role in the relevant global discourses. It proposes to re-examine pre-modern China's intellectual property history and look for inspirations for intellectual property theories from China's historical and cultural perspectives.

Chapter Two elaborates on several methodologies related to this thesis. It points out the reasons behind the Western common misunderstanding of China's culture and history and

⁹⁰ For instance, as Nathan Sivin points out, 'The scientific revolution problem put forward by Needham provided a shooting gallery in which anyone could fire a few rounds and no one kept score'. Nathan Sivin, 'Science and Medicine in Imperial China – The State of the Field', 47 *The Journal of Asian Studies* 41 (1988), p. 50.

⁹¹ Several works have been done in this field. For instance, see Mark Elvin, *The Pattern of the Chinese Past: A Social and Economic Interpretation*, California: Stanford University Press, 1973; R. Bin, Wong, *China Transformed: Historical Change and the Limits of European Experience*, Ithaca: Cornell University Press, 1998; Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, Princeton NJ: Princeton University Press, 2000; Li, Bo-zhong, *Duo shijiao kan Jiangnan jingji shi (Multi-dimensional Observations on the Kiangnan Economy)*, Beijing: Sanlian shudian, 2003.

demonstrates the possibilities and approaches for Chinese history and culture to join the conversations of contemporary legal studies.

Chapter Three analyzes Chinese notion of creativity in the fields of philosophy, literature and science and technology. This provides a background to understand the emergence of intellectual property as well as the importance of using knowledge to benefit the public.

Chapter Four provides a full examination of pre-modern China's proto-intellectual property practices in respect of copyright and family-based model of craft secrecy. Pre-modern Europe's intellectual property history is comparatively discussed when necessary.

Chapter Five encapsulates pre-modern China's understanding of monopoly, social welfare and the dissemination of knowledge. Intellectual property practice is put into these contexts to see its effect on the public interest. European experience is comparatively studied when necessary.

Chapter Six examines pre-modern China's trademark history to see its similarities and differences with copyright and the family-based model of craft secrecy in terms of the role of exclusive rights and the public interest.

Chapter Seven examines the widely applied intellectual property theory known as Lockean theory, its historical background, and its influences on the current expansion and overprotection of intellectual property. Incentive theory is also discussed to see its linkage with Lockean theory.

By taking into consideration the historical findings of the previous chapters, Chapter Eight tries to establish a new theoretical starting point for intellectual property. To analyze the matter, several Chinese philosophical concepts are employed and developed.

Based on the suggestions provided by Chapter Eight, Chapter Nine aims at expanding the theoretical framework of intellectual property to accommodate the public interest and place it in a position equal to the rights of knowledge creators.

CHAPTER TWO

Methodologies and Several Issues about Chinese Civilization

*Only several pieces of the coffeepots
made in the Ming dynasty (1368-1644) are left.*

– The French Sinological expert René Étiemble (1909-2002).¹

Our research will delve into the perplexing topic of China's intellectual property history and, in turn, some explorations and criticisms of today's intellectual property theories. The completion of these tasks however requires a thorough analysis of China's historical and cultural background.

This chapter aims at developing several new research methods, which are likely to provide new perspectives to observing Chinese history and exploring the positive roles of Chinese culture in the ongoing theoretical conversations of modern legal studies in general and intellectual property studies in particular.

This chapter tries to demonstrate that China's own historical trajectory of social development is not incompatible with modernity and future evolution of human civilization. As a result, contemporary China's transition is not a mere consequence of the impact of the West. There are various types of inspirations that can be discovered in China's historical experiences and cultural merits, which are not stagnant and lifeless but robust, regenerative and capable of contributing hugely to our evolving modern world.

These perspectives are constructive to the studies of intellectual property history and philosophy the rest of this thesis will explore. China's intellectual property history will be able to accommodate thorough analyses based on more facts and findings. Historical inquiry, together with a theoretical analysis based on some Chinese philosophical concepts, will in turn add some values to the fierce arguments about today's intellectual property theories.

2.1. Equal comparison

¹ René Étiemble, *L'Europe Chinoise*, Paris: Gallimard, 1989. For its Chinese version, see *Zhongguo wenhua xichuan ouzhou shi (History of the Cultural Transmission from China to Europe)*, translated by Geng Sheng, Beijing: Shangwu yinshu guan, 2000, p. 170.

With respect to the first question proposed in Chapter One -- ‘Can we have a better understanding of pre-modern China’s intellectual property history and the relevant issues?’ -- we immediately face a difficulty set up by Max Weber, a distinguished German sociologist and a pioneer of the modern analytical method of sociology.

Two famous books of Max Weber have contributed to the dominant understanding of Chinese culture, which is viewed by Weberian scholars as incompatible with European civilization and modernity built on it.² For instance, according to the Weberian methodology, traditional China is often understood as stagnant or lacking basic cultural elements of the rule of law. This approach is not based on sufficient evidence. For instance, Weber fails to discover the Confucian requirement of reciprocal obligations embedded in the relationship between parents and children (or states and subjects) and only views such relationship as submissive.³ The notion of submission, as Thomas Metzger suggests, are *de facto* against Confucian teachings.⁴ Father Père Huc’s personal experience in the late Qing period provides a good example. As he articulated, ‘unlike what some people imagine, Chinese do not bend their backs under the rods of their masters... [because] the most powerful counterweight to imperial authority is provided by the social group of the [Confucian] scholars.’⁵

Alford was somehow an active opponent of Weberian methodology. In an eloquent essay, he heavily criticized Roberto Unger who follows Weber to view China as a negative example of modernity. As Alford pointed out, that Unger proudly labels Europe as the only source of modern concepts of rule of law is a result of his entire unawareness that ancient China’s legal system was underpinned by some fundamental Chinese concepts such as the Mandate of Heaven and reciprocal obligations that constituted a natural-law tradition.⁶

² Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. by Talcott Parsons, London: Allen & Unwin, 1962. Max Weber, *The Religion of China: Confucianism and Taoism*, trans. & ed. by Hans H. Gerth, London: Free Press, 1968.

³ Tu Wei-ming, ‘Youguan ruxue yanjiu de jichong zhang’ai (On Several Obstacles to Confucian Studies)’, in *Rujia chuantong de xiandaihua (The Modernizations of Confucian Tradition)*, ed. by Yue Hua, Beijing: Zhongguo guangbo dianshi, 1992, pp. 16-7. Tu criticized Arthur Waley. Arthur Waley, *The Analects of Confucius*, London: Allen & Unwin, 1938, pp. 74-162. Also see Lin Duan, *Rujia lunli yu falü wenhua: shehuixue guandian de tansuo (Confucian Ethics and Legal Culture: Exploration from Sociology)*, Beijing: Zhongguo zhengfa daxue, 2002, p. 93; 122.

⁴ Thomas A. Metzger, *Escape from Predicament: Neo-Confucianism and China’s Evolving Political Culture*, New York: Columbia University Press, 1977, p. 46.

⁵ Simon Leys, *The Burning Forest: Essays on Chinese Culture and Politics*, London: Paladin Grafton Books, 1988, pp. 84-5.

⁶ William P. Alford, ‘The Inscrutable Occidental? Implications of Roberto Unger’s Uses and Abuses of the Chinese Past’, 64 *The Texas Law Review* 915 (1986), p. 937. But surprisingly in his *To Steal a Book*, Alford returns to Weber’s methodology. Roberto Mangabeira Unger, *Law in Modern Society: toward a Criticism of Social Theory*, New York: Free Press, 1977.

How did these misunderstandings happen? We can of course point out that Weber himself knew nothing about Chinese language and therefore made no direct study of Chinese society, resulting in his inability to gather enough data before analysis.⁷ However, how is it that Weber reached his conclusions and why have so many others, including Unger, easily believed Weber?

It is often argued, largely by Chinese scholars, that the Weberian methodology is deeply rooted in an 'either-or' Eurocentric dualism: because modern capitalism did not grow under Confucianism, then Confucianism must be antagonistic to capitalism.⁸ The arguments purporting that pre-modern China was alien to intellectual property notions adopt the same logic: contemporary China's rampant piracy industry suggests that intellectual property notions are against traditional Chinese values.

Mark Elvin has provided a more sociological explanation of Weber's Eurocentric dualism: Weber overstressed motives instead of analyzing the complex interaction between motives and what might be called 'the conjunctural context', leading him to ignore the fact that different ideas and motives may serve broadly similar functions. Elvin gives us an example that both Russian orthodox Christianity and Confucianism, which are different from Protestantism, *de facto* sprouted capitalistic notions and practices; to a great extent, the late-traditional Chinese values and ideas were in most respects already suitable for modern economic growth, suggesting that the key inhibiting constraints to an endogenous lack of industrial revolution are not cultural.⁹ However, the above two explanations are not exhaustive. They do not question why Weber was so proud of those Protestant cultural motives that he inclined to view them as incomparable and determinative.

To further explore this matter, I would like to suggest we revisit Edward Said's maxim about mankind's limited intellectual ability: no production of knowledge in the human sciences can ever ignore or disclaim the author's involvement as a human subject in his own circumstance.¹⁰ The emergence of Eurocentrism must have been accompanied by the limited literary resources about China. However, why did Eurocentrism rise in the

⁷ Lin, *Confucian Ethics and Legal Culture*, p. 178. Victor Purcell, *The Boxer Uprising: A Background Study*, London: Cambridge University Press, 1963, p. 43.

⁸ Lin, *Confucian Ethics and Legal Culture*, p. 88.

⁹ Mark Elvin, 'Why China Failed to Create an Endogenous Industrial Capitalism: A Critique of Max Weber's Explanation', 13 *Theory and Society* 379 (1984), p. 380.

¹⁰ Leys, *The Burning Forest*, p.96.

nineteenth century when Western civilization started to become the strongest global dominance unmatched by the rest of the world?

An important reason is that, as I call it, the negligence of ‘equal comparison’. The dominance of the West may have made the Westerners generate, at least subconsciously, a psychology to start their comparative study by pondering the huge and visible gap between the West and China rather than by investigating thoroughly vicissitude and historicity. It seems that the different destinies of Europe and China must have a direct link to their different pasts and cultures; the eagerness of exploring this question may have resulted in less dependence on toiling at searching more detailed evidence, especially when evidence was seemingly ready to be gleaned by observing the contemporary *status quo* of China. Therefore, the thoroughness of equal comparison has been largely taken over by psychology rather than truth. As the noted historian Karen Turner points out, despite the availability of many new historical findings since Weber’s time, it is surprising how often Western sinologists have continued to echo Weber’s nineteenth-century vision of China.¹¹

A further understanding of this matter should take into account the recent studies of the sixteenth-eighteenth century Europe-China relationship, which had experienced an intriguing process from *Sinophilie* (pro-China) to *Sinophobie* (anti-China). The very limited information about China obtained by the Europeans at that time did not stop their enthusiasm to compare Europe with China. China was often used not as China itself but as a mirror for Europe to either impel Europe to catch up with China or prove the glory of its own.¹² Weber’s understanding of China was also instrumental. As the noted Weberian scholar Lin Duan has pointed out, Weber was not really interested in describing a real China; in Weber’s logical structure of ideal type, China was used to highlight the unique achievements of the West.¹³

Various Western scholars have clearly realized the fundamental obstacles of unequal comparison resulted from Eurocentrism. When refuting the criticism of traditional China’s lack of strong notions of self-consciousness and self-expression, David Hall and Roger Ames point out that such concepts can only be a modern invention if we read them

¹¹ Karen Turner, Gao Hong-jun & He Wei-fang (ed.), *Meiguo xuezhe lun zhongguo falü chuantong* (*American Scholars on Chinese Legal Tradition*), Zhongguo zhengfa daxue, 1994, p. 16.

¹² Xu Ming-long, *Ouzhou shiba shiji zhongguo re* (*The 18th-century European Enthusiasm about China*), Taiyuan: Shanxi jiaoyu, 1999, p. 332. Also see René Étiemble, *The History of the Westing of Chinese Culture to Europe*, p. 50.

¹³ Lin, *Confucian Ethics and Legal Culture*, p. 93; 122.

strictly as the critics do.¹⁴ Joseph Needham has suggested that it is ridiculous to probe Chinese science and technology by relying on De Groot, a folklore expert of Amoy, as we cannot expect the British folklore expert Cecil Sharp and Mand Comme to be the sources of British intellectuals' cosmological understanding.¹⁵ That the Westerners only observed China at the grassroots level, as the distinguished Neo-Confucian scholar Xu Fu-guan suggested, is attributable to their difficulty of meeting the 'high-level tradition' of Chinese culture, which existed among the well educated populations.¹⁶

With respect to legal studies, Mark Allee has demonstrated that, to understand the crucial role of civil rights in pre-modern China, it is more adequate to focus on the *quotidian* trials rather than rebellions, bizarre crimes and ambiguous legal issues, which were not part of daily life but were those indicated in criminal codes and drastically summarized in legal cases issued by the highest judicial authorities of imperial China.¹⁷ Turner points out the Western scholars' common mistake of criticizing imperial China's lack of the rule of law system by using criteria only suitable for judging early modern Europe. For instance, if the division of power prescribed by a written constitution is a *sine qua non* of rule of law, then no pre-modern government can be viewed as having that notion.¹⁸ Even in the nineteenth century, there was less difference between English and Chinese criminal law than was the case latter when the English law had been reformed; the English law could be more brutal as the death penalty was even applied to minor crimes.¹⁹

Yin Hai-guang, one of the most noted Chinese liberalists who had devoted his entire life to criticizing Chinese culture, realized in his late times that he failed to equally compare China with the West. He was disappointed by his misstep and turned to enjoy Chinese culture. He said, 'It is a fundamental mistake to compare the historical [Chinese] society with the early modern Western society.'²⁰ Unfortunately, so far, the majority of Chinese scholars in Mainland China still keep making the same mistake. It has even deteriorated towards an extreme end. Quite understandably, as compared with the rapidly modernized post-war West, the much less developed Mainland China makes Chinese scholars, like

¹⁴ David L. Hall & Roger T. Ames, *Thinking from Han: Self, Truth, and Transcendence in Chinese and Western Culture*, Albany: State University of New York, 1988, p. 5.

¹⁵ Joseph Needham, *Zhongguo gudai kexue sixiang shi (History of Scientific Thoughts in Pre-modern China)*, trans. by Chen Li-fu, Nanchang: Jiangxi renmin, 1999, pp. 358-59.

¹⁶ Xu Fu-guan, 'Lun chuantong (On Tradition)', in *Xu Fu-guan wenlu xuancui (Selected Essays of Xu Fu-guan)*, Taipei: Taiwan xuesheng shuju, 1980, p. 110.

¹⁷ Mark A. Allee, *Law and Local Society in Late Imperial China: Northern Taiwan in the Nineteenth Century*, California: Stanford University Press, 1994, pp. 3-4; p. 7.

¹⁸ Turner, *American Scholars on Chinese Legal Tradition*, p. 223.

¹⁹ Purcell, *The Boxer Uprising*, p. 64.

²⁰ Chen Gu-ying, *Yin Hai-guang zuihou de huayu -- Chuncan tosi (Yin Hai-guang's Last Words -- Spring Silkworm Spins)*, Taipei: Huanyu, 1972, p. 34; 56.

the sixteenth-century Europeans, psychologically unable to escape from the illusion of the West and to appreciate the pressing importance of equal comparison.

Weberian Eurocentrism starts to shrink when the economic miracle created by East Asia becomes attractive. Philip Huang, a renowned expert of Chinese studies, reviewed the trends of Chinese studies in the West from the 1950s to the 1980s, arguing that in general the Western scholars had been trying to liberate themselves from Eurocentrism and to compare China with Europe equally.²¹ Since then, scholars have been increasingly interested in seeking more evidence rather than romantically or ideologically maintaining the heterogeneity between China and the West.

Taking an example of the comparative legal studies, increasingly scholars incline to agree that following a Weberian approach to interpret traditional Chinese legal practice as *kadi* justice based on magisterial whims lacks historicity.²² Derk Bodde and Clarence Morris have provided a notable study on criminal justice in the Qing dynasty. They conclude that trials in China were based upon systematic and rational process in which the judges' whim was rare.²³ In addition, they argue that every judgement had to refer to the relevant laws; the normal judicial procedure of the empire was likely to succumb to a potential arbitrary decision only when the emperor personally interfered in a given case, which, however, in the event of emperor's unfair judgement, always resulted in continuous and bull-headed resistance from the relevant organisations with an outcome, in most of the cases, that the emperor yielded.²⁴ A sixteenth-century European captive provided his personal experience of imperial China's criminal justice. As he recaptured, 'the sentences are conformable to the laws; they judge according to the truth of the matter, which they inquire into themselves.'²⁵

In terms of civil rights, the term 'justice' was also fundamentally important. The eloquent analyses based on the studies of various case records provided by Huang are noteworthy. Huang advocates that, in the civil context, rights rather than state domination should be more focused because in practice, the imperial legal system routinely protected the

²¹ Philip C. C. Huang, 'The Paradigmatic Crisis in Chinese Studies: Paradoxes in Social and Economic History', 17 *Modern Chin* 299 (1991).

²² Max Weber, *Economy and Society: An Outline of Interpretive Sociology*, 3 vols., New York: Bedminster Press, 1968, pp.976-8.

²³ Derk Bodde & Clarence Morris, *Law in Imperial China*, Cambridge: Harvard University Press, 1973, p. 541.

²⁴ Bodde & Morris, *Law in Imperial China*, p. 174. For an early and different view on Chinese laws, see Gustavus Ohlinger, 'Some Leading Principles of Chinese Law', 8 *Mich. L. Rev.* 199 (1909-10).

²⁵ This was recorded in Mendoza's book, published in Rome in 1585, which reached the great vividness and accuracy of China by the narrative derived from captives. G. F. Hudson, *Europe and China: A Survey of their Relations from the Earliest Times to 1800*, Boston: Beacon Press, 1961, pp. 242-4.

legitimate claims of common litigants to property, contracts, inheritance, old-age support and the like. The legislations and judicial systems served to empower the common people in major areas of their *daily* lives.²⁶ Even in the late Qing when society was less stable, courts welcomed people from various statuses and were not confined to the privileged.²⁷

A recent good example of equal comparison is the *Great Divergence* written by Kenneth Pomeranz.²⁸ He emphasizes the necessity of comparability -- it is not suitable to compare eighteenth-century England with the entire Chinese empire; the former can only be compared with the lower Yangtze River region known as Kiangnan.²⁹ An immediate implication of this method is that China's failure to spontaneously generate the industrial revolution should not be attributed to cultural incompatibility but should take into consideration other determinative causes such as the bottlenecks of economic development.

In sum, Weberian Eurocentrism not only has a dualistic problem; it is also a psychology ignoring equal comparison. By equal comparison, we would be able to echo one of Pomeranz's conclusions that China and Europe were once very similar to each other.³⁰ In terms of intellectual property history, it enables ample evidence to be taken into consideration in the next four chapters to illustrate that intellectual property and its relevant issues are not purely European phenomena but can find their analogues in pre-modern China, even if not every detail was the same.

2.2 Internal dynamics and in-process

With respect to the third question proposed by Chapter One -- 'Can we develop some new perspectives on intellectual property theories by using some elements of Chinese philosophy?' -- we encounter two unavoidable questions: first, whether Confucianism is still alive and constructive to our modern society; second, how is it possible?

For quite a long time, a 'museum method of approach', as the distinguished Neo-Confucian scholar Carsun Chang put it, has popularly been adopted by Western scholars

²⁶ Philip C.C. Huang, *Civil Justice in China: Representation and Practice in the Qing*, Stanford: Stanford University Press, 1996, p. 224; pp. 235-6.

²⁷ Allee, *Law and Local Society*, pp. 3-4; p. 252.

²⁸ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, Princeton NJ: Princeton University Press, 2000.

²⁹ Pomeranz, *The Great Divergence*, preface of its Chinese version, trans. by Shi Jian-yun, Nanjing: Jiangsu renmin, 2003, pp. 2-3.

³⁰ *Ibid.*

to study Confucianism, the representative of Chinese culture.³¹ Chinese traditional culture, as Joseph Levenson has purported in the 1960s, is already dead and therefore can only be studied in museums.³² Unfortunately, Levenson utterly failed to predict the fate of Confucianism, which so far has played a vivid and positive role in East Asia's rapid progress of modernization. Levenson's mistake is a direct result of the above-discussed Eurocentrism. Thanks to unequal comparison, Weberian scholars are unable to discover the great 'internal dynamics' of Confucian spirits in driving modernization.³³

Based on equal comparison, historical studies supporting the argument of internal dynamics have boomed remarkably since the second half of the twentieth century, especially when some Asian scholars started to pay close attention to the *shixue* (concrete or practical learning) trend of sixteenth-seventeenth century China. These studies show that the *shixue* trend was to produce and encourage some fundamental aspects of modernity such as capitalism, modern scientific theory, and rule of law.³⁴ The significance of these studies is that they have demonstrated that post-1840 China was not merely refusing Western culture or learning 'at gun point';³⁵ rather, at least some parts of modernity introduced from the West were to a great extent connecting and resuscitating the internal dynamics of the *shixue* trend and even earlier Confucian thinking. For instance, without a deep understanding of the rediscovery of the concept of humanism during the Ming and Qing dynasties, it is impossible to explain why the Confucian intellectuals of the late nineteenth century were so enthusiastic in echoing the natural rights theory thrived in early modern Europe.³⁶ This progress of connecting and resuscitating has not been completed. Rather, after Mainland China's recommencement of modernization in 1978, this interrupted progress has been reestablished, although in a very arduous way.

³¹ Carsun Chang, *The Development of Neo-Confucian Thought*, vol. 1, New York: Bookman Associates, 1957, pp. 9-10.

³² Joseph R. Levenson, *Confucian China and its Modern Fate: A Trilogy*, Los Angeles: University of California Press, 1968.

³³ The greatest contribution of Tu Wei-ming seems to be his efforts of exploring the internal dynamics of Confucianism. For his early comments on this issue, see Tu Wei-ming, 'Rujia chuantong de xiandaihua (The Modernizations of Confucian Tradition)', *The Modernizations of Confucian Tradition*, pp. 37-8. Also see Turner, *American Scholars on Chinese Legal Tradition*; Wm. Theodore de Bary, *Neo-Confucian Orthodoxy and the Learning of the Mind-and-Heart*, New York: Columbia University Press, 1981.

³⁴ See, e.g., Ge Rong-jin, *Zhongri shixue shi yanjiu (Studies of Chinese and Japanese Shixue History)*, Beijing: Zhongguo shehui kexue, 1992. He zhao-wu, *Zhongxi wenhua jiaoliu shilun (History of the Cultural Exchanges between China and the West)*, Beijing: Zhongguo qingnian, 2001. Xu Hai-song, *Qingchu shiren yu xiyue (Literati in Early Qing Dynasty and Western Knowledge)*, Beijing: Dongfang, 2000.

³⁵ Alford argued that the late imperial China learnt western knowledge at gunpoint. Alford, *To Steal a Book*, p. 32.

³⁶ Zhao Ming, *Jindai zhongguo de ziran quanli guan (The Understanding of Natural Rights in Early Modern China)*, Jinan: Shangdong renmin, 2003, p. 20. Derk Bodde has provided evidence of Chinese understanding of natural laws. Derk Bodde, 'Evidence for "Laws of Nature" in Chinese Thought', 20 *Harvard Journal of Asiatic Studies* 709 (1957).

The internal dynamics are vital to China's future development of modernization. Clyde Kluckhohn who examined the tragedy of the Weimar Constitution argues that it is entirely unimaginable for a nation to build up new culture on the ruins of its tradition.³⁷ For China, the possibility of creating a healthily modernized society lies on continuous explorations of the internal dynamics of Chinese culture. In this regard, establishing a better knowledge management system such as an intellectual property regime also relies on further historical and cultural inquiry rather than simply describing China as an alien of intellectual property. Turner is quite confident of the potential role of Chinese culture in contemporary China. As she suggests, in ancient China there existed several fundamental aspects of rule-of-law thinking, which can be the foundation of contemporary China's pursuit of establishing democracy.³⁸

Although learning from the West must continue to be a key task for contemporary China, discovering internal dynamics should not be understood as blindly cloning every detail of the embodiments of modern Western culture. For instance, elaborating on the rule-of-law thinking from a Confucian perspective does not simply mean analogizing it with some genres of the Western legal theories, however overwhelming the similarities seem to be.³⁹ Otherwise, we are still trapped in the Eurocentric maze and, quoting Andre Gunder Frank, looking under European street lights with a psychology that the front is always gloomy.⁴⁰

I would like to propose an 'in-process' methodology, which views human civilization as a whole as in a process of interacting with each other and evolving from lower levels towards higher levels.⁴¹ It is better to view Western civilization as a solid threshold and a good example of modernity rather than a consummate and constantly unchangeable model. Both Western civilization and Chinese civilization are streams of the grand river of human civilization; they will eventually converge and flow towards higher levels. The famed historian Cheng Zhong-ying inclines to view modernization as a dynamic process

³⁷ Clyde Kluckhohn (ed.), *Culture and Behavior*, New York: The Free Press of Glencoe, 1962, p.70.

³⁸ Turner, *American Scholars on Chinese Legal Tradition*, p. 10; p. 358.

³⁹ The distinguished Neo-Confucian scholar Mou Zong-san maintains this view. For comments, see Zheng Jia-dong, *Duanlie zhong de chuantong (Tradition in Discontinuation: Between Beliefs and Rationalism)*, Beijing: Zhongguo shehui kexue, 2001, p. 123.

⁴⁰ Andre Gunder Frank, *ReOrient: Global Economy in the Asian Age*, Berkeley: University of California Press, 1998, p. 7.

⁴¹ The in-process methodology might be relevant to the process philosophy proposed by Alfred North Whitehead. According to him, what people commonly think of as concrete *objects* are actually successions of occasions of experience. Alfred North Whitehead, *Process and Reality, An Essay in Cosmology*, London: Collier Macmillan, 1979.

rather than a fixed structure, in which the character of modernity is marked by continuous communications among different causes.⁴²

Internal dynamics and in-process are dissimilar to the interaction, or ‘glocalization’, between universalism and particularism, which has been advocated by the noted sociologist Roland Robertson when discussing the impact of globalization.⁴³ The notions of universalism and particularism are initially proposed by Talcott Parsons. In Parsons’s view, universalism is mainly understood as values bearing modern and Western characters while particularism is often understood as non-Western.⁴⁴ Inspired by the economic miracle of East Asia, researchers in the past several decades have tended to demonstrate that Asian particularism such as family business model and moderate authoritarianism to a certain degree can help modernization. For instance, a strong government in some circumstances is necessary and effective to regulate economy when laissez-faire is impossible to establish. Here authoritarianism is clearly viewed as particularism, which believes in rule of men and therefore is different to the universal value of rule of law.

I would like to argue that although universalism and some aspects of local particularism can be complementary, merely overemphasizing particularism is unable to provide effective solutions to satisfy the goals of modernization of developing countries. It is also likely to result in universalism being taken over by submission,⁴⁵ or, as John Rawls has criticized, simple pluralism, which allows the existence and expansion of various irrational and even violent thoughts such as Islamic fundamentalism.⁴⁶

The dichotomy of universalism and particularism is still Eurocentric and is a result of unequal comparison. It refuses to accept the internal dynamics of Chinese culture and only views it as conditionally acceptable to coexist with modernity. More importantly, it fails to see that particularism could also be Western while universalism could be non-Western. For instance, respecting individual dignity should be viewed as a universal value of human society; but this does not necessarily follow the extreme individualism that largely exists in today’s Western world. Extreme individualism can largely be viewed

⁴² Cheng Zhong-ying, ‘Zhengti xing yu gongsheng xing – rujia lunli yu dongya jingji fazhang (Holism and Symbiosis -- Confucian Ethic and the Economic Development in East Asia)’, in *Zhonghua renwen jingshen xinlun (A New Understanding of Chinese Tradition of Humanism)*, ed. by Wu Guang, Shanghai: Shanghai guji, 1998, p. 35.

⁴³ Roland Robertson, *Globalization: Social Theory and Global Culture*, London: Sage, 1992, p. 102.

⁴⁴ Talcott Parsons, *The Structure of Social Action*, Glencoe: Free Press, 1949, pp. 550-51.

⁴⁵ Lin Duan has realized that he encounters difficulties to reduce the potential danger of the submission of universalism to particularism when he proposes the interaction between them. Lin, *Confucian Ethics and Legal Culture*, p. 99.

⁴⁶ John Rawls, *Political Liberalism*, New York: Columbia University Press, 1993, p.144.

as particular rather than universal if we take into consideration the recent arguments about liberalism and equality such as those provided by Ronald Dworkin and Alasdair MacIntyre.⁴⁷

If we observe internal dynamics within the process of human civilization, then some Chinese values could also be possible candidates for future universal values. In recent years, the harmony between nature and human society has been remarkably developed from Confucian and Taoist perspectives.⁴⁸ This theme was largely ignored in the past, which has resulted in environmental problems. As the global understanding of the importance of environmental protection increases, this principle should be accepted by universalism rather than viewed as a particular Asian value. Yet, in different cultures and regions, the embodiments of this universal value and many others often vary. Such a trend has been noticed by two Christian scholars Robert Neville and John Berthrong in the 1990s. They announced the advent of Boston Confucianism and articulated that in the future Confucianism will also become one aspect of the self-consciousness of Europe.⁴⁹

However, many Western scholars are reluctant to view culture as in a process of harmonization. Some of them even incline to follow Samuel Huntington to view different cultures as being in conflict and irreconcilable, believing that the inescapable brutal war among Christianity, Islam and Confucianism will soon come.⁵⁰ This vision stifles constructive ideas. As Alford has predicted, had Unger approached preimperial China with a respect comparable to that he accorded to post-Renaissance European society and tried to make use of insights from China, he might well have structured his sophisticated new social order differently.⁵¹

2.3. Abstract inheritance

Notwithstanding the increasingly positive role played by Chinese culture in some international academic areas, the relevant efforts are overwhelmingly put into exploring

⁴⁷ Dworkin suggests that equality must be enjoyed by community members. Ronald Dworkin, *Sovereign Virtue: The Theory and Practice of Equality*, Cambridge, MA: Harvard University Press, 2000. In his highly regarded book *After Virtue*, MacIntyre emphasizes the role of virtue and community and criticizes individualism. Alasdair MacIntyre, *After Virtue*, Notre Dame: University of Notre Dame Press, 1984.

⁴⁸ See, e.g., Mary Evelyn Tucker & John Berthrong (ed.), *Confucianism and Ecology: The Interrelation of Heaven, Earth, and Humans*, Cambridge: Harvard University Center for the Study of World Religions, 1998.

⁴⁹ Robert Cummings Neville, *Boston Confucianism: Portable Tradition in the Late-Modern World*, Albany, N.Y.: State University of New York Press, 2000. Robert Cummings Neville, *Behind the Masks of God: an Essay toward Comparative Theology*, Albany: State University of New York Press, 1991, p. 130.

⁵⁰ Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order*, New York: Simon & Schuster, 1996.

⁵¹ Alford, 'The Inscrutable Occidental?', p. 960; 970.

the moral values of Chinese culture. This tendency fails to recognize that the fate of socialist Mainland China fundamentally relies on continuous constructions of its legal and political substructure,⁵² which, as Turner has suggested, requires Chinese values to be excavated, revived and advanced.

Several Neo-Confucian scholars in the mid-twentieth century made several efforts to theorize modern Confucian legal thoughts to cope with constitutionalism and democracy.

⁵³ However, religious and moral values of Confucianism continue to be the main focus of contemporary Neo-Confucian studies under the leadership of Tu Wei-ming, the eminent professor of Harvard University. In Mainland China, Su Li, the Dean of Law School of Peking University, has proposed a 'native legal resources' theory, which has been widely discussed by Chinese scholars. As Su argues, when modernizing the whole country, China must recognize the importance of using traditional rural customary regulations in unenlightened villages and especially remote regions because people in those places have difficulties to understand the concepts of modern laws.⁵⁴ Su's argument is a direct result of his awareness of some practical difficulties in modernizing China's legal systems in those remote places. However, his proposal is too narrow and often dangerous.

Reinforcing rural customary regulations fails to see the internal dynamics of Chinese values, which do not have many concrete embodiments in the underdeveloped areas, and can result in the submission of universalism to particularism. The hope of improvement in those areas shall rely on not conservatism but effective measures of education and economic development.

In recent years, research on the positive relationship between Confucianism and modern legal concepts such as human rights has been developed by several Western scholars. As they have argued, Confucian thinking is not only helpful in understanding many aspects of modern legal thinking, it has *de facto* promoted democratization in East Asia.⁵⁵

⁵² A Taiwan scholar Jiang Nian-feng has argued that Confucianism must be able to develop modern legal theories. Jiang Nian-feng, 'Fazheng zhuti yu xiandai shehui -- Dangqian rujia yinggai sikao de wenti (The Legal and Political Mainmast and Modern Society -- Questions that needs to be Explored by Contemporary Confucianism)', 111 *Zhongguo wenhua yuekan (Chinese Culture Monthly)*, Taipei: Donghai daxue, 1989, p. 71.

⁵³ Carsun Chang's great contribution is noteworthy. See, e.g., Carsun Chang, *Xianzheng zhi dao (The Way of Constitutionalism)*, Beijing: Tsinghua daxue, 2006.

⁵⁴ Su Li, *Fazhi jiqi bentu ziyuan (Rule of Law and its Native Resources)*, Beijing: Zhongguo zhengfa, 1996.

⁵⁵ Daniel A. Bell, *East Meets West: Human Rights and Democracy in East Asia*, Princeton, N.J. : Princeton University Press, 2000; Wm. Theodore de Bary, *Asian Values and Human rights: a Confucian Communitarian Perspective*, London: Harvard University Press, 1998; Michael C. Davis, *Human Rights and Chinese Values: Legal, Philosophical, and political perspectives*, Oxford: Oxford University Press, 1995; Ying-shih Yu, *Democracy, Human Rights and Confucian Culture*, Oxford: Asian Studies Centre, 2000. Peter Yu is the only intellectual property scholar who previously suggested that it is much more constructive and beneficial to focus on *common traits* between the Western IP notions and Chinese philosophies. Peter Yu, 'From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-first Century', 50 *Am. U. L. Rev.* 131 (2000), p. 187. During a personal conversation with Prof. Yu in an international conference held in

However, merely exploring legal resources in traditional Confucian legal thinking is far from enough. I would like to propose a methodology of ‘abstract inheritance’, by which the rediscovery of internal dynamics in process is not confined within a given thought itself but should introduce the *logic* of non-legal thoughts of Confucianism into the realm of modern legal studies. Hilary Putnam believes that sometimes incompatible theories can actually be intertranslatable.⁵⁶ As the erudite Neo-Confucian scholar Feng You-lan has argued, philosophical propositions must have two facets: abstract implications and embodied implications; merely concentrating on the latter is misleading.⁵⁷ For instance, the implications of learning, which constitutes one of the fundamental principles of Confucius’s teachings, should be understood as the discovery of the importance of learning *itself* to the improvement of human civilization rather than as merely studying the knowledge set up in Confucian Classics. As far as this thesis is concerned, the logic of balance, which is systematically developed by Confucianism from ontological and moral perspectives, can be employed to discuss the inherent nature of knowledge, and in turn, the relocation of the starting point of intellectual property theory.

The flexibility of this methodology can be supported by various cultural phenomena taking place in human civilization. For instance, Roman laws, which are said to mark the threshold of modern concepts such as democracy and equality, was not stagnantly rediscovered and inherited in the late middle ages. For instance, the notion of contract is entirely an early modern invention because it was insignificant in Roman patriarchal society.⁵⁸ As will be discussed in the next chapter, the evolution of Confucianism is also full of the energy of abstract inheritance; inspirations are often drawn from social transition and other philosophies such as Buddhism, Christianity and liberalism. For contemporary Mainland China, a real discovery of the potential energy of Chinese values shall not be restricted by mere restoration and conservatism. Rather, continuous meliorations of Confucian ‘modes of thinking’,⁵⁹ or to put it more explicitly, a ‘Protestant movement for Confucian schools’ should be accelerated.⁶⁰ Yet, when applying this

London in 2004, he said that, for the US-China intellectual property debates, discovering Chinese cultural merits is more important than exaggerating their conflicts. This comment very much echoes with my studies.

⁵⁶ Hilary Putnam, *Reason, Truth and History*, Cambridge: Cambridge University Press, 1981, p. 73

⁵⁷ Feng You-lan, ‘Zhongguo zhexue yichan de jicheng wenti (The Issue of Inheriting Chinese Philosophy)’, *Guangming Daily* (8th January 1957).

⁵⁸ Rolf Knieper, *Gesetz und Geschichte: Ein Beitrag zu Bestand und Veränderung des Bürgerlichen Gesetzbuchs*, Nomos, Baden-Baden, 1996, pp. 131-32.

⁵⁹ Carl J. Friedrich, *Tradition and Authority*, London: Macmillan, 1972, p. 39. Yu Ying-shi, ‘Junzun chenbei xia de junquan yu xiangquan -- fanzhi lun yu zhongguo zhengzhi chuantong yulun (Sovereignty and the Power of Prime Minister under the Notion of Junzun chenbei)’, in *Zhongguo zhishi fenzi lun (On Chinese Intellectuals)*, Zhengzhou: Henan renmin, 1997, p. 100.

⁶⁰ A Protestant movement for Confucian schools is a concept that I proposed initially in a paper published in 2003. Ke Shao (Yin-zhi Shao), ‘On the Premises of Understanding the Positive Interactions between Confucianism and Rule of Law’, 1 *Academic Journal of Soochow University (Philosophy & Social Science)* 35 (2003).

methodology instrumentalism should be avoided.⁶¹ The theoretical foundation of Confucianism itself makes abstract inheritance possible. As the medieval Neo-Confucian scholars have demonstrated, the entire universe itself is within a ceaseless, dynamic and creative progress of evolution.⁶²

2.4. Conclusions

This chapter has weaved a background for the rest of this thesis. The historical inquiry of the next four chapters will be based on equal comparison, which enables more evidence of pre-modern China's intellectual property history to be taken into account without Eurocentric prejudices. The theoretical suggestions made in Chapter Eight and Chapter Nine will benefit from the methodologies of internal dynamics, in-process and abstract inheritance. Those theoretical suggestions are directly linked to the internal dynamics of Chinese culture, which are compatible with and constructive to modern legal studies. They are not inclined to blind Westernization but are made in a belief that the existing intellectual property theories are imperfect and are within an evolving progress towards higher levels. They do not belong to particularism but could be a good candidate of universal values. Some logics of Confucian non-legal thoughts will be abstracted and developed to inspire legal principles.

These efforts are primary experiments and by no means bear the mark of cultural arrogance or discrimination. Nor do they account for the inability of Western philosophies in mending the currently dominated intellectual property theories. They are no more than several small drops of the grand river of human civilization, which are inspired by the past and will flow together with other drops towards the future.

⁶¹ Lin Yu-sheng proposes a model of creative transformation of Confucianism, suggesting 'using the model of diverse thinking to reorganize or reconstruct some (not all) symbols, thoughts, values and behaviour patterns of Chinese tradition to... make them into resources positive to reform, which can meanwhile maintain cultural identity.' Lin Yu-sheng, *Zhengzhi zhixu yu duoyuan shehui (Political Order and Diverse Society)*, Taipei: Lianjing chuban gongsi, 1989, p. 388. Li Ming-hui is suspicious of the instrumental tendency of Lin's theory. Li Ming-hui, *Dangdai rujia de ziwo zhuanhua (Self-transformation of Contemporary Confucianism)*, Beijing: Zhongguo shehui kexue, 2001.

⁶² Liang Shu-ming, 'Tan shengming yu xiangshang chuangzao (On Life and Upward Creativity)', in *Kongzi xueshuo de chongguang -- Liang Shu-ming xin ruxue lunzhu jiyao (The Revival of Confucius's Teaching -- Selected Essays of Liang Shu-ming's Studies of Neo-Confucianism)*, ed. by Zheng Da-hua & Ren Jing, Beijing: Zhongguo guangbo dianshi, 1995. Fang Dong-mei, 'Zhongguo xingshang xue zhong zhi yuzhou yu geren (Universe and Individuals in Chinese Metaphysics)', in *Zhongguo wenhua de tezhi (The Characteristics of Chinese Culture)*, ed. by Liu Xiao-feng, Beijing: Sanlian shudian, 1990, p. 9.

CHAPTER THREE

Chinese Creativity: Respecting the Past and Continuous Innovation

*In our tradition,
words should come from one self.
Otherwise, one plagiarizes.*

– Han Yu (768-824, Tang Dynasty), One of the greatest Confucian authors.

‘Walls, walls, and yet again walls!’ The distinguished Swedish scholar Osvald Sirén (1879-1966) must have sighed when he arrived at the grand gate of Beijing City in the early twentieth century.¹ The walls, as Sirén put it, appear to symbolize a popular metaphor for the old Chinese empire, whose late imperial image may freshly remain to linger somewhere in our mind, either vigorously or subconsciously. In this mysterious oriental country, it seems that people were polite but submissive, gentle but weak; they admired and even feared their ancestors, thinking little about creating more.

A detailed exploration of pre-modern China’s intellectual property phenomena will immediately be confronted with the conventional views of the ‘walled Chinese empire’, which have influenced many, including possibly William Alford and for sure those who follow him. It is commonly accepted in the West that respecting the past has resulted in China’s failure to generate intellectual property concepts and practices independently.²

This chapter provides some different answers. It focuses on making a scrutiny into the vivid images of Chinese understanding of creativity. Confucianism will be mainly discussed as it reflects the basic and fundamental way of thinking of the Chinese majority.

3.1. In the name of worshipping the past: transmission and creativity

The noted copyright scholar Carla Hesse has argued in a succinct essay that the recognition of creativity is largely a modern phenomenon because in every civilization knowledge was traditionally regarded as coming from divine revelation or the past. In

¹ Osvald Sirén, *The Walls and Gates of Peking*, London: John Lane The Bodley Head, 1924, p. 1.

² Professor William Alford took up a significant part of his book to portray a Chinese image of creative sterility to underpin his belief in the non-existence of intellectual property concepts and practices in pre-modern China. See William P. Alford, *To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization*, California: Stanford University Press, 1995, pp. 19-29.

addition to illustrating European history, Hesse particularly mentioned China to support her argument by referring to William Alford.³ Alford believes that ‘the power of past and its consequences for possession of the fruits of intellectual endeavour’ is overwhelming in Chinese history.⁴ He points out such a so-called Chinese-characterized phenomenon by quoting the noted scholar of Chinese literature Stephen Owen, who articulated that ‘the Confucian imperative insists that in encountering the ancients, we ourselves must be changed.’⁵ According to this, Alford further suggests that ‘the replication of particular concrete manifestations ... by persons other than those who first gave them form *never* carried ... the dark connotations ... [as] it does in the West.’⁶ Alford’s theory of past thus, from a cultural perspective, denies the possibility of generating the concept of copyright and other intellectual property forms in Chinese values.

Hesse’s use of China is common. There is of course a difference between Hesse-style scholars and many others.⁷ For the former, the evidence of lack of creativity is employed to shake the sacred foundations of intellectual property, which is often said to be historically ‘eternal’ and ‘natural’.⁸ For the latter, however, China’s example is frequently used to condemn contemporary China’s notorious piracy problems; as they purport, the Chinese do not really want to create and only steal the creative fruits of the Western genius.⁹ But has China been rightly used? Is it necessary to criticize intellectual property by denying the existence of creativity?

It is noteworthy that Alford rightly points out that the historical inquiries made by Confucius (551BC-479 BC) should not be construed as connoting a lack of originality, although his theory of the past begins with Confucius’s famous saying: ‘I transmit rather than create; I believe in and love the ancients’.¹⁰ This is true even if we purely label Confucius as a chronicler who treats the original text prudentially and avoids random

³ Carla Hesse, ‘The Rise of Intellectual Property, 700 B.C. – A.D. 2000: an Idea in the Balance,’ *Dædalus* (Spring 2002), pp.26-29. It is often argued that in Medieval Europe, the real task of the scholar was not the vain excogitation of novelties but the discovery of great old books. See Ernst P. Goldschmidt, *Medieval Texts and Their First Appearance in Print*, The Bibliographical Society, 1943, p. 112.

⁴ Alford, *To Steal a Book*, pp. 19-29.

⁵ Stephen Owen, *Remembrances: The Experience of the Past in Chinese Literature*, Cambridge, Mass.: Harvard University Press, 1986, p. 15; 22. Alford, *To Steal a Book*, p. 26.

⁶ Alford, *To Steal a Book*, p. 28.

⁷ For instance, by referring to Alford’s book, Cohen and Noll argue that in China creative acts are one step in a historical continuum, and so usually not attributable to a specific person. Linda R. Cohen & Roger G. Noll, ‘Intellectual Property, Antitrust and the New Economy’, 62 *U. Pitt. L. Rev.* 453 (2001), p. 453.

⁸ The ‘ancient and eternal idea’ suggested by Frank Prager and the ‘natural need of the human kind’ suggested by Harold Streibich seem to allure us to think in this way. Frank D. Prager, ‘The Early Growth and Influence of Intellectual Property’, 34 *Journal of the Patent Office Society* 106 (1952), p. 106; Harold C. Streibich, ‘The Moral Right of Ownership to Intellectual Property: Part I— from the Beginning to the Age of Printing’, 6 *Memphis State University Law Review* 1 (1975), p. 2.

⁹ For those widely distributed comments, see footnotes 57, Chapter One.

¹⁰ *The Analects of Confucius*, Book VII, Chapter 1. Alford, *To Steal a Book*, p. 27.

collation and haphazard explanation.¹¹ As Alford argues, by quoting Edward Pulleyblank, ‘the selection and arrangement of [the historian’s] ... material called for the exercise of critical judgement, and conclusions about the causes of events or the characters of historical persons could be expressed separately in the appropriate place.’¹² However, Alford does not further examine other aspects of Confucius’s creative sparks.

Alford’s overemphasis of the role of past is *de facto* a Weberian approach, which views Confucian culture as submitting to parents, authorities and ancestors.¹³ However, Confucianism itself as a set of principles and concepts is not invariable. Even the Tao (way), which constitutes the central values of Confucianism and is transmitted from the past, is not entirely unchangeable. As Herrlee Greel argues, Confucius has never defined his way.¹⁴ The Tao is not viewed as a ‘fixed code’ but a ‘way of ideals’,¹⁵ which, as William de Bary puts it, needs to be continuously reconstituted.¹⁶ The Tao itself contains the progress of creativity and is not simply a revivalist process. As Tu Wei-ming suggests, individuals can draw inspiration from the past and discover new meanings by their own experience and consciousness.¹⁷ The Tao may also change when situations change and the Tao can be improved in tune with social evolution.¹⁸ Even if some aspects of the Tao are permanently unalterable, there are still ample spaces left for creativity. Herbert Fingarette provides an insightful understanding. He suggests that a sole idea of Tao, which excludes individual creativity, cannot explicitly actualize every aspect of social life, as mere proficiency in the basic skills and common elements of music is not sufficient to create an original and charismatic stanza.¹⁹

Throughout history, the Tao has been repossessed and reinterpreted several times, often in the name of worshipping the past. In this regard, Confucius himself is a highly creative

¹¹ Confucius never made conjectural collation. As the *Kung-yang chuan* commentator He Xiu (129-82) indicated, Confucius never guessed, never was arbitrary, never was obstinate, and never relied on purely subjective judgments. See Susan Cherniack, ‘Book culture and textual transmission in Sung China’, 54 *Harvard Journal of Asiatic Studies* 5 (1994), p. 18.

¹² Edward Pulleyblank, ‘The Historiographic Tradition’, in *The Legacy of China*, ed. by Raymond Dawson, London: Oxford University Press, 1964, p. 150. Alford, *To Steal a Book*, p. 27.

¹³ Please see Chapter Two for more details.

¹⁴ H. G. Greel, *Confucius and the Chinese Way*, New York: Harper & Row, 1960, pp. 172-4.

¹⁵ Greel, *Confucius and the Chinese Way*, pp. 172-4.

¹⁶ Wm. Theodore de Bary, *The Liberal Tradition in China*, New York: Columbia University Press, 1983, p. 25.

¹⁷ Tu Wei-ming, ‘Renshi chuantong (Understanding Tradition)’, *Rujia chuantong de xiandaihua (The Modernizations of Confucian Tradition)*, ed. by Yue Hua, Beijing: Zhongguo guangbo dianshi, 1992, pp. 174-75.

¹⁸ As the great Confucian philosopher Wang Fu-zhi (1619-1692) articulates, in pre-historical times, there is no civilized Tao...and today we do not have many Tao that the future society will have. Wang Fu-zhi, *Zhouyi waizhuan*, Vol. 5 *Xici shang*.

¹⁹ Herbert Fingarette, *Confucius: The Secular as Sacred*, London: Harper & Row Press, 1972, pp.92-100. In his book, Fingarette repeatedly applied ‘creativity’, ‘original thinking’, and ‘reformer’ to describe Confucius. See, e.g. pp.6, 60, 99.

genius.²⁰ His transmission and love of the past Tao should be best understood as humility and wisdom rather than starchiness. As articulated by Kuang Ya-min, who has written the biographies of many Confucian scholars, ‘Confucius created while transmitting’.²¹ This explains that why Confucius’s core conceptions of benevolence, equal education and electing the competent run contrary to the most wonderful system of the Zhou kingdom that Confucius himself admired, and that he acted not merely as an editor, compiler, abridger or expurgator, but, as demonstrated in the case of compiling the *Zhou Yi* and the *Chun-qiu*, comes close to being what we would call, in a modern context, an author.²²

Confucius’s academic behaviour *per se* remains a paradigm of Confucian tradition, which was established expressly by Mencius (372–289 BC), who criticized the learning method treating Confucius as a still model for imitation.²³ This fostered a vogue for scepticism in the Song dynasty (960-1279) when printing mushroomed rapidly, transmitting knowledge to a much more significant extent. It was widely encouraged that, as one of the most noted Neo-Confucian thinkers Cheng Yi (1032–1107) said, “Student must first of all be able to doubt”. This was echoed by many others, including the most successful Confucian philosopher, Zhu Xi (1120–1200), who taught that “great doubts lead to great progress”, and put his philosophy into practice by proposing numerous innovations in the fundamental Confucian Classics.²⁴ As a matter of fact, that Confucianism constantly reinvented itself by coming to terms with the political and social changes of the time is nowhere more clearly illustrated than in the case of the Song Neo-Confucianism.²⁵ Individuals with independent personalities and creative sparks remarkably increased in the Song, albeit this phenomenon was largely confined within officials, literati and high-class merchants.²⁶ In the Ming (1368-1644), creativity started to emerge in ordinary

²⁰ Many reputed scholars view Confucius as a creator. Greel argues that Confucius did not blindly adhere to the tradition if we look into the background of ancient Chinese of his time. Greel, *Confucius and the Chinese Way*, p.144. Wei Zheng-tong argues that Confucius had creatively transformed the former tradition of Zhou. See Wei Zheng-tong, *Zhongguo sixiang chuantong de chuangzao zhuanhua: Wei Zhengtong zixuan ji (The Creative Transform of Chinese Philosophical Tradition: A Selection of Wei Zhengtong)*, Kunming: Yunnan renmin, 2002, p. 131. Peerenboom describes Confucius a creator. R. P. Peerenboom, ‘Confucian Justice: Achieving a Humane Society’, 30 *International Philosophical Quarterly* 17 (1990), pp. 17-32. Shigeki Kaizuka argues that Confucius introspected the tradition of his time. Shigeki Kaizuka, *Confucius*, trans. by G. Bournes, London: George Allen & Unwin, 1956, pp.119-26. Roger T. Ames and David L. Hall disagree with the view which sees Confucians as those who merely transmit rather than create. David L. Hall & Roger T. Ames, *Thinking through Confucius*, Albany: State University of New York Press, 1987, p. 90.

²¹ Kuang Ya-min, *Kongzi zhuan (The Biography of Confucius)*, Nanjing: Nanjing daxue, 1990, pp. 343-4.

²² Cherniack, ‘Book Culture’, p. 16. For a discussion of Confucius’s creative reform of the Zhou dynasty’s traditional thoughts, see Wu Long-hui, *Yuanshi rujia kaoshu (An Examination of the Ancient Confucianism)*, Beijing: Zhongguo shehui kexue, 1996, pp. 38-74.

²³ *Wanzhang zhangju II, Mencius*. Quoted from Tu Wei-ming, *Tao, Learning and Politics: On Confucian Intellectuals*, Wen-zhong Qian and Qin Sheng trans, Shanghai: Shanghai renmin, 2000, p. 41.

²⁴ Cherniack, ‘Book Culture’, pp. 26-7.

²⁵ Daniel Bell and Hahm Chaibong, *Confucianism for the Modern World*, Hong Kong: City University of Hong Kong, 2005, p. 26.

²⁶ Wm. Theodore De Bary, *The Unfolding of Neo-Confucianism*, New York: Columbia University Press, 1975, p. 6.

people, especially when Wang Yang-ming (1472-1528), the second authoritative Confucian thinker after Zhu Xi, theorized the possibility for ordinary people to become sages.²⁷ With respect to creativity in humanism and individualism, the sixteenth and seventeenth centuries are probably the most creative and exciting period in China's history.²⁸

The justification of change and creativity stems from one of the fundamental philosophies of Confucianism, which views the entire universe as an endless, positive and progressive process.²⁹ In particular, the Song Neo-Confucianism developed a sophisticated theoretical system of *taiji* (Supreme Ultimate) to explain the creative nature of the universe. Zhang Zai (1020-1077) was one of the first Song Confucian scholars who invented the *taiji* theory. He attributes the driving force behind the universe to the continuous power of creativity.³⁰ Therefore, if the universe itself is creating things in a continuous way, then human beings must not be satisfied by merely being the creature of the universe but should actively participate in the creative process.³¹ The meanings of life can only be reflected by continuous creative progress;³² otherwise, as the erudite Song philosopher Lü Zu-qian (1137-1181) has argued, in hundreds of years the world will remain stagnant.³³

The role of the past is of course crucial. In every civilization, the past overlooks the present because the present needs acknowledged principles and paradigms, which largely come from the past, to be its societal underpinning. However, as Lloyd Rudolph demonstrated, it is more important to dialectically examine the relation between the past and the present.³⁴ In many instances, the past is not absolute but is always creatively

²⁷ Tu Wei-ming, 'Zhuti yu shiti (Subject and Entity)', in *The Modernizations of Confucian Tradition*, pp. 467-68.

²⁸ Wm. Theodore De Bary, *Self and society in Ming thought*, New York: Columbia University Press, 1970, p. 3.

²⁹ Liang Shu-ming, 'Tan shengming yu xiangshang chuangzao (On Life and Upward Creativity)', in Kongzi xueshuo dechongguang – Selected Essays of Liang Shu-ming's Study of Confucianism, ed. by Zheng Da-hua & Ren Jing, Beijing: Zhongguo guangbo dianshi, 1995, p. 150. Fang Dong-mei, 'Zhongguo xingshangxue zhong zhi yuzhou yu geren (Universe and Individuals in Chinese Metaphysics)', in *Zhongguo wenhua de tezhi (The Characteristics of Chinese Culture)*, ed. by Liu Xiao-feng, Beijing: Sanlian shudian, 1990, p. 9.

³⁰ Tu Wei-ming, 'Song Ming ruxue de bentu lun (Confucian Ontology of the Song and Ming Dynasties)', in *The Modernizations of Confucian Tradition*, p. 492.

³¹ Cheng Zhong-ying, 'Chuangsheng xing fanchou zhi fenxi – lun huaitehai yu song ming ruxue zhi leitong yu fenye (An Analysis of the Scope of Creativity – On the Similarities and Differences between Whitehead and the Song and Ming Confucianism)', in his *Zhongguo wenhua de xiandai hua yu shijie hua (The Modernization and Globalization of Chinese Culture)*, Beijing: Zhongguo heping, 1988, p. 154. Also see Shi Zhong-lian, *Xiandai xin ruxue zai meiguo (Modern Neo-Confucianism in the United States)*, Shenyang: Liaoning daxue, 1994, pp. 166-70.

³² Xiong Shi-li, *Xin weizhi lun (A New Theory of Consciousness-Only)*, Beijing: Zhonghua shuju, 1985, p. 149.

³³ Lü Zu-qian, *Gu, Yishuo*.

³⁴ Lloyd I. Rudolph, *The Modernity of Tradition – Political Development in India*, University of Chicago Press, 1967, p.2.

updateable without denying the values from the past. In a Chinese sense, the past is not the only thing. As the reputed French Sinologist Jacques Gernet has articulated, nothing can be more evident as a Chinese character than the notion that the future is always different from the past.³⁵

3.2. Literary creativity and anti-plagiarism

What is the significance of creativity for Chinese literature? From a conventional view, Chinese literature and art significantly lack creativity or originality.³⁶ This is interpreted as a result of archaism, as suggested by the Ming poet Li Meng-yang's famous slogan cited by Alford, 'prose must be like that of the Qin or the Han, and poetry must be like that of the High Tang.'³⁷ However, the archaism Alford quoted is an unsuccessful and notorious one in the seventeenth century. The vital reason for its ultimate failure is not the non-thoroughness of imitating the past poetic glory but the ignorance of creativity. It is thus not surprising to hear Li Meng-yang's moan in his old age: 'my poems are not *unstudied*...I always want to modify them... but I am now getting old!'³⁸ This reveals his repentance for his archaism by which he failed to write to reflect his own personality. However, this is not inclined to derogate Li's school merely as a production of fatuity because, under the background of literal displacement Li and his colleagues encountered, their most urgent task was to combat the decadent and flattering style, and to re-erect some fundamental and vital formulas or the Tao of poetry instituted by the Tang poets.³⁹

After Li's school, anti-archaism became a torrent of several genres which fervently advocated independent thinking. Yuan Hong-dao of the *gong'an* school argues: 'Can anyone say that the most glorious poets such as Ou-yang Xiu(1007-72), Su Shi (1037-1101) and Huang Ting-jian (1045-1105) in the Song dynasty had ever imitated a *single* word of the [previous] Tang poets and had ever copied each other?'⁴⁰ He thus preached that 'real poetry comes from your nature and soul...[T]he supremeness means those poems which are difficult to be produced by an ordinary mind.'⁴¹ Ye Xie (1627-1703), a

³⁵ Jacques Gernet, 'Lun Zhongguo ren de bianhua guannian (On Chinese Conception of Change)', *Faguo hanxue (French Sinology)*, vol. 1, ed. by Denys Lombard & Li Xue-qin, Beijing: Qinghua daxue, 1996, p. 25.

³⁶ Witold Rodzinski, *The Walled Kingdom: A History of China from Antiquity to the Present*, New York: The Free Press, 1984, p. 134.

³⁷ 'Biography of Li Meng-yang', *Ming History*. Also see Alford, *To Steal a Book*, p. 27.

³⁸ Li Meng-yang, 'Shiji Zixu (Autobiographic Note of Poems)', *Kongtong ji (Kongtong Anthology)*, vol. 50. Cited from Liu Zun-guang, *Zhongguo gudai yishu sixiang shi (The History of Chinese Traditional Artistic Thought)*, Shanghai: Shanghai renmin, 1998, pp. 179-80.

³⁹ Liu, *The History of Chinese Traditional Artistic Thought*, p. 180.

⁴⁰ *Ibid.*, p. 260.

⁴¹ *Ibid.*, p. 254.

noted Qing poet, expressed explicitly his understanding on originality and its relation to individual intellectual creativity: ‘generally speaking, the authors of the past and the present distinguish themselves with each other and consider themselves no ordinary beings; they always contend themselves with their earlier authors and are *never* willing to be dependent and steal something cast off by others.’⁴² It is thus apparent that these authors were not, as Alford has assumed, criticizing archaism merely for its omission to imitate the more essential ‘meaning and flavor’ animating the great poetry of the Tang (618-907), and thinking so much of the ‘need to address in so central a fashion the past’;⁴³ on a very high poetic level, they strongly inclined to create according to their own mind.

Literary creativity had existed long before the Ming. Throughout the centuries, different styles and genres emerged. Even the most influential and successful archaism movements initiated in Tang and Song dynasties when literature and poems unprecedentedly flourished are not addicted to the past but are splendidly creative. They aimed at improving the present style, which was unpleasant and declining, by reviving the previous spectacular ones with an eventual goal to create better. The Tang poetry was epoch-making in particular because prose was for the first time separated as an independent branch from history and philosophy.⁴⁴ Creativity popularly existed among the Tang poets. For instance, Wei Ying-wu (737-92), who embedded a particular version of the aesthetic of ‘blandness’ (*pingdan*) into the heart of his poetics, helps us to distinguish between his contribution and that of Tao Yuan-ming (365-427) and, especially, Wang Wei (701-761), despite a propensity to include them in the same category.⁴⁵ The archaism movements of the Song dynasty began in the early eleventh century. Distinguished Song poets made tremendous efforts to study and rediscover the creative achievements of their ancestors; but they also emphasised that learning from the past should not stifle individual creative sparks.⁴⁶ In his poetic comment *Liuyi shihua*, Ou-yang Xiu, the leader of the Song archaism, expressed his dissatisfaction at the early Song’s trend of imitating the former poem styles. He wrote: ‘excellent means that the idea is *new*, the style is delicate, and the result transcends what the predecessors have not

⁴² Ye Xie, *Yuan Shi (On Poetry)*, Beijing: renmin wenxue, 1979, p. 9.

⁴³ Alford, *To Steal a Book*, p. 27.

⁴⁴ *Zhongguo wenxue shi (Literature History of China)*, Literature Research Institute, ed. by Chinese Academy of Science, Beijing: Renmin wenxue, 1962, p. 332.

⁴⁵ Paula M. Varsano, ‘The Invisible Landscape of Wei Yingwu (737-792)’, 54 *Harvard Journal of Asiatic Studies* 407 (1994), p. 434.

⁴⁶ Qian Zhi-xi, ‘Linglue gufa sheng xinqi – Huang Ting-jian, Yuanyou shige gaochao yu Jiangxi shipai (Appreciating the Traditional Principles and Creating Newness: Huang Ting-jian, Yuanyou Poetry and the Genre of Jiangxi Poetry)’, in *Guoji hanxue (International Sinology)*, Vol. 4, ed. by Ren Ji-yu, Zhengzhou: Daxiang, 1999, pp. 267-94. Also see James J. Y. Liu [review], ‘The Evolution of Chinese Tz’u poetry: From Late T’ang to Northern Sung’, 41 *Harvard Journal of Asiatic Studies* 672 (1981), p. 673.

achieved.’⁴⁷ There are many innovations existing within the Song lyric poetry, among which self-realization through poetry marks its most unique function.⁴⁸

Creativity was further stimulated when printing flourished. New editions and works became selling points and many tried to provide detailed and professional comments to attract well-educated customers. A preface appearing in a poem collection, *Wei Su-zhou ji* (Collections of Wei Ying-wu), printed in 1275 reads:

Reading the poems of Wei Ying-wu (737-92) makes you feel like plucking herbs in the high mountains, sitting on the rocks, drinking the spring water, and totally forgetting to get back. However, reading those of Meng Hao-ran (689-740) makes you feel like seeking willow and plum flowers and then prowling into a tranquil temple. Although their flavours are similar, they start from different perspectives. Wei’s poems are like smooth rocks but Meng’s are like snow, which is white, lightsome.⁴⁹

It is understandable that the Western readers conventionally find Chinese literary works sterile. Weber’s approach aside, it is extremely difficult, if not impossible, to translate, and thus transmit a Chinese poem into European sense merely by the power of language. What the translator offers to the Western readers is not the often unique ‘subaudition’ or spirits within the words but the least admirable part of a poem: its subject matter and its conventional and monotonous images such as mountains, gardens, bamboos, pied magpies and clouds.⁵⁰ However, for a Chinese poet, the supreme art is to position, adjust, and fit together these well-worn images in such a way that, from their unexpected encounter, a new life might spark.⁵¹ As *Wenxin diaolong*, the sixth-century masterpiece of Chinese critical literary studies argued, aesthetically a good writer must be able to dislodge worlds from their hackneyed referents and create them anew by interweaving them into beautiful, unrivalled patterns.⁵²

⁴⁷ Yang Wei-sheng, *Liang Song wenhua shi yanjiu* (Studies on the Cultural History of the Song Dynasty) (Hangzhou: Hangzhou daxue, 1998, pp. 777-78.

⁴⁸ Kang-i Sun Chang, *The Evolution of Chinese Tz’u poetry: From Late T’ang to Northern Sung*, Princeton: Princeton University Press, 1980, p. 165.

⁴⁹ Cited from Shi Yong-qin, ‘Gudai chuban shang de duzhe fuwu yishi (Customers in Publishers’ Concepts in Imperial China)’, 6 *Bianji xuekan* (Journal of Compilation) (2001), p. 23. For the high originality of Wei, see Varsano, ‘The Invisible Landscape of Wei Yingwu’, p. 434.

⁵⁰ Simon Leys, *The Burning Forest: Essays on Chinese Culture and Politics*, London: Paladin Grafton Books, 1988, p.35. For a comment disagreeing with the view which purports that no creativity existed in Chinese literature, see Stephen R. Bokenkamp, ‘Chinese Metaphor Again: Reading-and Understating-Imagery in the Chinese Poetic Tradition’, 109 *Journal of the American Oriental Society* 211 (1989), pp. 211-21.

⁵¹ Leys, *The Burning Forest*, p. 35.

⁵² Zong-qi Cai (ed.), *A Chinese Literary Mind: Culture, Creativity, and Rhetoric in Wenxin diaolong*, Stanford: Stanford University Press, 2001, pp. 9-11.

The exceptional attention paid to creativity sometimes made Chinese scholars extremely strict on originality. Gu Yan-wu (1613-1682), a landmark of the Confucian philosophy, expressed his rigor in writing his *Ri zhi lu*: 'I shall avoid those that have already been written by our predecessors;⁵³ I only write those that have *never* been seen before and those necessary for our latter generations'.⁵⁴ It is apparent that printing and the wide distribution of books enabled him to read widely but achieving such a high originality would be significantly difficult -- as he revealed in a letter to his friend, 'for a year I studied from morning till night, but I have only gleaned about ten [ideas].'⁵⁵ Often authors vehemently attacked the lack of originality throughout the Chinese history. The noted literati Zhu Yun-ming (1460-1527) derided two forms of vapidty: imitation and the ignorance of real life. Such writers, he wrote, are akin to someone who 'cadged one piece of robe tail from his east neighbour and begged another piece of collar from his north vicinage [and then put them together]. Other residents glanced at him and said: [look!] That tail belonged to our east neighbour and that collar belonged to our north vicinage!' He concluded that such poems are like 'smearing various colours into one flower, or primping as a lady by an actor, which please the vulgar taste but unfortunately are unworthy of degustation.'⁵⁶ Another famous literati Xu Wei (1521-93) applied a more acerbic tone: 'some birds can imitate human languages. Although they speak humanly, they remain as birds...[A]re there any differences between some contemporary poets and such birds? They have never produced their own verses but merely steal what others have already said...[T]hey resemble verisimilarly, but they are unavoidably identical to those mimic birds!'⁵⁷

The humoristic condemnation on the lack of originality poured out by Zhu and Xu does not disturb the significant tolerance towards imitation that the Chinese show, if imitation is defined, in the words of Benjamin Kaplan, the foundation of education.⁵⁸ A more felicitous expression could be, as Bruce Cole says, originality does not exclude the co-existence of imitation.⁵⁹ In a sense, the Chinese were no less zestful on a pervasive imitation on the precedent artistic formulae and patterns than the Renaissance artists were.

⁵³ Gu Yan-wu, 'Zixu (author's preface)', *Rizhi lu*.

⁵⁴ Gu Yan-wu, 'Zhushu zhi nan (The Difficulty of Writing a Book)', *Rizhi lu*, vol. 19.

⁵⁵ Hua Chen-zhi (collated), *Gu Ting-lin wenxuan (Essay Collections of Gu Yan-wu)*, Chengdu: Sichuan renmin, 1998, p. 58.

⁵⁶ Zhu Yun-ming, 'Preface for Zhu Xing-fu's Poems', *Collections of Zhu Yun-ming*, Vol. 2, in *Collections of Chinese Aesthetic Materials*, Beijing: Zhonghua shuju, 1981, p. 101. Quoted from Zhuang Yan & Zhang Zhu, *Zhongguo shige meixue shi (The Aesthetic History of Chinese Poetry)*, Changchun: Jilin daxue, 1994, pp. 245-6.

⁵⁷ Xu Wei, *Preface for Ye Zi-su's Poems. Ibid.*, pp. 118-9.

⁵⁸ Benjamin Kaplan, *An Unhurried View of Copyright*, New York: Columbia University Press, 1967, p. 2.

⁵⁹ Bruce Cole, 'Titian and the Idea of Originality in the Renaissance', in *The Craft of Art: Originality and Industry in the Italian Renaissance and Baroque Workshop*, ed. by Andrew Ladis & Carolyn Wood, Athens: University of Georgia Press, 1995, p. 87.

They would have sufficiently agreed with an aphorism of Scaliger that the best method of imitating nature is to imitate Virgil.⁶⁰ An evident example is the fashion for Chinese children to learn calligraphy, which starts from imitating line by line the greatest calligraphers such as Yan Zhen-qing and Liu Gong-quan of the Tang dynasty.

Understanding imitation from an educational perspective is helpful to construe the real background of Wen Fong's comments on Chinese painting, which were heavily relied upon by Alford to underpin his view of intemperate tolerance of imitation. Wen Fong's understanding of painting replication is as follows: '*bona fide* copying in ancient China [i.e., copying without the intent to *deceive*]...was...a vitally necessary form of art. It was the only way to reproduce – and by reproducing to *circulate* and *perpetuate* – treasured masterpieces of calligraphy and painting'.⁶¹ Imitation was relatively more justified largely due to the crucial role of imitation in the initial stage of painting learning and its disassociation with publishing.⁶²

Alford does not mention the extent to which imitation or replication is *not* allowed by Chinese authors. In fact, in the event that imitation or replication exceeds its boundary, it results in not only a repulsion or jibe in the case of lacking originality, but a severe condemnation in the circumstance that if someone dares to purport that a certain form of artistic work, *e.g.*, the calligraphy of the great Tang artist Yan Zhen-qing (709-785), is originated from himself. This is not simply because most Chinese are able to identify Yan as the inventor of his style; rather, it is because false claims of originality or mental labor on other's works breach the fundamental ethic of the Chinese.

Such immorality is defined as plagiarism. China, as other great civilizations did in the distant historical past,⁶³ warned its people to be apart from plagiary, as explicitly

⁶⁰ S. Orgel, 'The Renaissance Artist as Plagiarist', 48 *English Literary History* 476 (1981), p.485. However, this does not mean there was no sense of originality during the Renaissance. See Cole, 'Titian and the Idea of Originality in the Renaissance', p. 87.

⁶¹ Wen Fong, 'The Problem of Forgeries in Chinese Painting', 25 *Artibus Asiae* 95 (1962), p. 95. Jerome Silbergeld, 'Chinese Painting Studies in the West: A State-of-the-Field Article,' 46 *The Journal of Asian Studies* 849 (1987), pp. 849-97.

⁶² The creative sparks of Chinese painters will not be detailed mentioned here. For a comment, see Ke Shao (Yin-zhi Shao), 'Alien to Copyright?: A Reconsideration of the Chinese Historical Episodes of Copyright', 4 *Intellectual Property Quarterly*, London: Sweet & Maxwell, 2005, footnote 99, p. 417.

⁶³ Vitruvius, a Roman architect and writer, highly praised the authors of the past, while condemning both plagiarism of dead authors. Other authors such as Athenaeus Mechanicus used past authors selectively but all accorded them honor and respect. See Pamela O. Long, *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance*, Baltimore: The Johns Hopkins University Press, 2001, pp. 34-35. Linking a work with its original author by referring to his name was a common sense since pre-Islamic Middle East. Because poetry is 'the court of the Arabs', the authors of fine poems were always granted social respect and ultimately wealth. This yet resulted in various forms of plagiarism in order to obtain wealth, such behavior was harshly condemned and generally classified as a crime, as reflected in various verses of Arab poetry. Writers are entitled to use another's ideas and concepts so long as they are

articulated by two sentences in its ancient Confucian canon, *Qu li*, which reads: ‘Do not plagiarize (*wu chao shuo*); do not imitate (*wu lei tong*).’⁶⁴ At the latest, from the third to fifth centuries, anti-plagiarism had become a common notion for Chinese intellectuals.⁶⁵ The famous and endless debates about the real author of a Taoist commentary of that period well reflect the situation, as recorded in the contemporarily celebrated literary work *Shishuo xinyu*:

Initially, there were only several commentators working on the *Zhuang zi* [*i.e.*, one of the two masterpieces of Taoist scholars], however, no one could explore its essential meanings. Xiang Xiu originally wrote a commentary named *Jie yi* (Construing the Meanings), which was of extremely wonderful analysis and thus effectively promoted the popularity of Taoism.

Unfortunately, he died before completing his two other pieces, *Qiu shui* (Autumn Water) and *Zhi Le* (The Supreme Joy). His son was young and his commentaries submerged, although there were other versions of them. Guo Xiang was a man of disgusting conduct but excellent talent. He discovered the lost of Xiang Xiu’s commentaries and *stole* them as his own work.⁶⁶

It is noteworthy that the author of *Shishuo xinyu* linked plagiarism to stealing and provided a moral judgement on the conduct of Guo Xiang, who, as the formal *Jin History* indicated, ‘possessed an important governmental position with influential political power, and was consequently blamed by the mainstream [because his behavior was unmatched with the Taoism he advocated].’⁶⁷ Although it is doubtful whether personal morality should always be a basic judgement for plagiarism – as many scholars have suggested, Guo’s theory differs significantly with Xiang’s⁶⁸ -- the key point is, in the mind of the ancient Chinese, how can a moral gentleman plagiarize?

formulated in their own words. This position bears some resemblance to the fair use exception. See Amir H. Khoury, ‘Ancient and Islamic Sources of Intellectual Property Protection in the Middle East’, 43 *IDEA* 151 (2003), pp. 151-56. The 30th verse of the Jeremiah Chapter 23 prohibits prophets to steal words. One of the forty principles of the Jewish law is ‘reporting a thing in the name of him who said it’. As a Rabbi said, stealing of words is worse than the stealing of money. It is not even ‘possible for the author to forgive you for the fact that his authorship was not mentioned.’ See Victor Hazan, ‘The Origins of Copyright Law in Ancient Jewish Law’, 18 *Bulletin of Copyright Society of the U.S.A.*, 23 (1970), pp. 24-7.

⁶⁴ ‘Qi li’ of *Li ji*.

⁶⁵ Cheng Tong-sheng, ‘Guo qie Xiang zhu: Zhonggu yida zhuzuoquan an (Guo Xiang’s plagiarism on Xiang Xiu’s Commentary: A Mystery of Authorship in Medieval China)’, 1 *Zhuzuoquan (Author’s Rights)* 55 (1997), p. 56.

⁶⁶ *Literature, Shishuo xinyu. Ibid*, p. 55.

⁶⁷ ‘Biography of Guo Xiang’, *Jin History*.

⁶⁸ Cheng, ‘Guo Xiang’s plagiarism’, pp. 55-56.

The problem of authenticity was not extremely disastrous throughout Chinese history because most works can be identified to their authors. Yu Jia-xi (1884-1955) recorded in his *Conventions of Ancient Books* (*Gushu tongli*) the beginning of such custom as follows:

Since the *Shi Jing* (Book of Odes) was partitioned into four and *Chun Qiu* (the Annals) was divided into five, family names were put on the books so as to indicate the original authors. However, because authors gradually appeared to cooperatively write various chapters of one book, it became necessary to put all of their family names on that book. Initially such indication was made by the successors, but eventually it became a task of the authors themselves; both family names and given names were then indicated. It is difficult to confirm when this custom began, but one can be sure that it prevailed since Han and Jin (220-420).⁶⁹

Throughout China's literary history, there were several other famous cases of plagiarism. In all those cases, plagiarists were heavily condemned without exception. In traditional Chinese academic atmosphere, creativity was often associated with scholarly hard working, which must be respected and safeguarded fairly.⁷⁰ As Gu Yan-wu said, 'for writing a book, nothing could be more dreadful than plagiarizing others' words.'⁷¹

3.3. Scepticism, factualism and utilitarianism: the possibilities of innovation

If the past has not played a strongly negative role in stifling creativity, are there any facts which prevent technological innovations in China? Is it possible that the impressive scientific and technological achievements that China reached occurred in a culture strongly opposite to innovation? Joseph Needham clearly finds it unthinkable to ignore this question. In general, he believes that the Chinese spirit of creativity is not less noticeable than that of their European peers.⁷² As Needham argues, the rationalism of Confucianism excludes religious spiritual revelation that always shackles scientific

⁶⁹ Cao Zhi, 'Zhongguo gudai zhuzuoquan kaolue (Exploration on Ancient China's Author's Rights)', 3 *Tushu yu Qingbao* (*Books and Information*) 35 (1988), p. 35.

⁷⁰ Benjamin A. Elman, *From Philosophy to Philology: Intellectual and Social Aspects of Change in Late Imperial China*, Cambridge: Council on East Asian Studies, Harvard University, 1984, pp. 222-6.

⁷¹ Gu Yan-wu, 'Caoshu zi xu', *Wenji*, vol. 2.

⁷² Xu Ming-long, *Ouzhou shiba shiji zhongguo re* (*The 18th-century European Enthusiasm about China*), Taiyuan: Shanxi jiaoyu, 1999, p. 314.

discoveries.⁷³ The whole Chinese atmosphere for science was quite positive: no creed had ever been set up to prohibit the probe of nature; and no church existed to reiterate that the earth is flat or God created mankind at four o'clock in a morning 4004 years ago.⁷⁴ This atmosphere has cultivated the Chinese minds to be fact-based and sceptical, conflicting little with scientific and technological changes.⁷⁵

A good example is the close, interactive and compatible communication between Neo-Confucianism of the Song dynasty (960-1279) and the contemporarily highly developed scientific and technological development. The most successful Neo-Confucianist Zhu Xi (1120-1200) was a man who deeply understood the opinions of the greatest Song Confucian-scientist Shen Kuo (1031-1095).⁷⁶ Zhu himself was also a fruitful scientist who viewed the stars upon his own experiments as objects performing relative movement.⁷⁷ According to the marvellous work of Shen, *Mengxi bitan*, the methodologies that the Song Confucian scholars applied include factualism, scepticism and field work.⁷⁸ These scientific concepts and many others, as Needham points out, are not heterogeneous with modern scientific thinking.⁷⁹

But Needham views Confucianism as a two-edged sword: its rationalist advantages did not quite effectively turn to benefit technologies because Confucian scholars are mainly interested in literature rather than handicrafts. Needham gives a vivid example of Chinese paintings in which the traditional intellectuals always gently hid their hands in their loose, noble sleeves.⁸⁰ He thus turns to explore the answers in Taoism, which he believes is a philosophy that extremely loves the natural world,⁸¹ and has laid the foundation of the entire Chinese science.⁸² Apparently, without an examination of Taoism, it would be difficult to explain that many things such as gunpowder can be traced to a Taoist origin. But casting the Taoists as heroes and denying the Confucian capacities of innovation

⁷³ Joseph Needham, *Science and Civilisation in China*, vol. 2: *History of Scientific Thought*, Cambridge University Press, 1956. In Chinese, see Joseph Needham, *Zhongguo gudai kexue sixiang shi* (*History of Scientific Thoughts in Pre-modern China*), trans. by Chen Li-fu, Nanchang: Jiangxi renmin, 1999, p. 14.

⁷⁴ Gilbert Rozman(ed.), *The Modernization of China*, New York: Free Press, 1982, p. 177.

⁷⁵ Rozman, *The Modernization of China*, p. 214.

⁷⁶ Hu Dao-jing, 'Zhuzi dui Shen Kuo kexue xueshuo de zhuan yan yu fazhan (Zhu Xi's Study and Development of Shen Kuo's Scientific Theories)', in *Zhu Xi yu zhongguo wenhua* (*Zhu Xi and Chinese Culture*), Shanghai: Shanghai xuelin, 1989, p. 178.

⁷⁷ Stephen F. Mason, *A History of the Sciences*, New York: Collier Books, 1962. Trans. by Zhou Xi-liang as *Ziran ke xue shi* (Shanghai: Shanghai yiwen), p. 75.

⁷⁸ Yue Ai-guo, *Rujia wenhua yu zhongguo gudai keji* (*Confucianism and Traditional Chinese Science and Technology*), Beijing: Zhonghua shuju, 2002, pp. 151-52.

⁷⁹ Needham, *History of Scientific Thoughts in Pre-modern China*, Beijing: Beijing kexue, 1990, p. 498.

⁸⁰ Needham, *History of Scientific Thoughts in Pre-modern China*, p. 14.

⁸¹ *Ibid.*, p. 116.

⁸² Needham, *History of Scientific Thoughts in Pre-modern China* (Beijing version), p. 1.

suffer from a lack of historicity,⁸³ especially when Needham scrutinizes little the Confucian thinking.

Confucius is conventionally viewed as the origin of the Confucian ignorance of technology. A frequently cited evidence is Confucius's famous saying of 'I am not as good as an old farmer' when his student Fan Chi asked him about farming.⁸⁴ It is often argued that Confucius replied to Fan in a contemptuous way, indicating his disdain of farmers and their agricultural techniques. Zhu Xi provided a different interpretation. He contextually argued that Confucius in fact expressed his discontent with the Agriculturists who opposed the division of labour when Fan Chi questioned with an Agriculturist manner.⁸⁵ Confucian scholars maintained that without the division of labour society will retrogress to primitive ages. Technology *per se* was not abominated by ancient Confucians such as Confucius himself and his successor Mencius. For instance, both of them repeatedly mentioned the importance of the farming season (*nong shi*), which was a crucial technological concept at that time;⁸⁶ The Confucian canon *Shi Jing* (Book of Odes), an anthology carefully selected by Confucius, has several songs recording the positive attitudes of ordinary people towards agricultural technology,⁸⁷ suggesting that Confucius shared the same sympathy with them. Confucius himself repeatedly advocated the rulers to invite all classes of artisans so as to increase societal wealth.⁸⁸ At any rate, Fan Chi's question remains no more than farming because nothing suggests that he was really interested in science and technology, which were ardently favoured by some other reputed students of Confucius.⁸⁹

The attitudes of Confucius and Mencius towards agricultural techniques originate from a crucial Confucian political concept of *jing shi zhi yong*, which centres attention on utilitarian enthusiasm for improving social welfare. The credo stems from the core of Confucianism of benevolence (*ren*), which emphasizes the secular love of the people and had underpinned in the last two millennia numerous Confucian scholars and officials. This attitude, together with scepticism and factualism, make Confucian

⁸³ Arthur F. Wright argues that it is a distortion to always credit inventions to the Taoists. Arthur F. Wright [review], 'Heavenly Clockwork: The Great Astronomical Clocks of Medieval China', 34 *Pacific Affairs* (1961), p. 79.

⁸⁴ Zilu, *The Analects*.

⁸⁵ *Zhuzi yulei*, vol. 43. Cited from Yue, *Confucianism and Traditional Chinese Science and Technology*, pp. 29-32.

⁸⁶ Yanyuan, *The Analects*; Liang hui wang shang, Mengzi. For the argument, see Yue, *Confucianism and Traditional Chinese Science and Technology*, p. 32.

⁸⁷ Wu Baosan (ed.), *Xianqin jingji sixiang shi (History of Economic Thinking in Ancient China)*, Beijing: Zhongguo shehui kexue, 1996, pp. 108-10.

⁸⁸ Chen Huan-Chang, *The Economic Principles of Confucius and His School*, 2edn., Bristol: Thoemmes Press, 2002, p. 316.

⁸⁹ Needham, *History of Scientific Thoughts in Pre-modern China* (Beijing version), p. 290.

scholars positive towards science and technology, which could be used to improve social benefits. Confucian scholars were notably interested in writing scientific and technological knowledge into their canons since the early stage of Confucianism.⁹⁰ Specialized scientific and technological books were produced in remarkable quantities by scholars who were Confucian-scientists or had well received Confucian education. Most of these books were landmarks that gained fame throughout history.⁹¹

The majority of Confucian literatures in traditional Chinese society are in tune with the argument that close attention must be paid to science and technology. *Yan shi jia xun* (Admonitions of the Yan Family), a widely distributed pamphlet in traditional China written by a noted Confucian litterateur Yan Zhi-tui (531- c.590), is a typical example, although it was not as professional as scientists or engineers may want it to be:

Every individual must have a job in our society. Farmers specialize in agriculture, merchants concentrate on trade, craftsmen devote to the sophisticated manufacturing, and intellectuals dedicate to books... However, some people are ashamed of discussing agriculture, trade and technology. Their shooting skill [which is regarded as one of the six Classical Arts by Confucius] is so poor that their arrow cannot pierce the target; their education is so primitive that they can only write their names. They are always satiated with eating and drinking and remain idle... If something serious happens, they cannot even make a discussion... [Please remember that] agriculture, trade and technology are all important. In each career there are many sages who are sufficiently to be your teachers and apotheoses. You should always be humble to learn from them, which will benefit yourself...⁹² Mathematics is also a crucial aspect of the Classical Arts. Every true Confucian scholar learns and comprehends it... Gaining professional mastery in medicine is very difficult so I do not recommend you to run the risk. But you should know the general medical knowledge. Wouldn't it be wonderful to use your medical knowledge at home?⁹³

⁹⁰ Yue, *Confucianism and Traditional Chinese Science and Technology*, pp. 33-37.

⁹¹ For detailed information and examples, see, e.g., Du Shi-ran, *Zhongguo gudai kexue jia zhuanji* (*Biographies of Traditional Chinese Scientists*), Beijing: Kexue, 1992. Qian Bao-cong, 'Jiuzhang suanshu jiqi Liu Hui zhu yu zhaxue sixiang de guanxi (Jiuzhang suanshu, Liu Hui's Annotation and its relation to Philosophy)', in *Qian Bao-cong kexue shi lunwen xuanji* (*Selected Essays of Qian Bao-cong's Studies of Scientific History*), Beijing: Kexue, 1983. Chen Qiao-yi, *Li Dao-yuan pingzhuan* (*Biographies of Li Dao-yuan*), Nanjing: Nanjing daxue, 1994, p. 34.

⁹² *Mianxue, Yanshi jiaxun*.

⁹³ *Zayi, Yanshi jiaxun*.

Therefore, Taoism aside, attention must equally be paid to Confucianism and even Buddhism. Otherwise, it would be difficult to explain that why many leading technologies, both as to scale and skill, were able to be invented in a society where the major population was educated by Confucian culture rather than Taoism. As a matter of fact, the majority of Chinese scientists, engineers and inventors were themselves Confucian adherents whose motives as well as scientific and technological research methods were typically influenced by Confucianism.⁹⁴

3.4. The Confucian understanding of innovation

The utilitarian, fact-based and sceptical Confucianism makes its adherents easily sensitive to new, innovative things which can promote social benefits. Contrariwise, Taoist innovative motive is sometimes limited within a cloistered and individual-oriented scope with a purpose to achieve immortality, either in this world or in another. The tremendous efforts they made were often concentrated on the human body and spirit, making the Taoists always the experts on health care, medicine, longevity and alchemy. Religious credos may make the Taoists hostile to the application of machines which can improve social benefits. The renowned Taoist founder, Zhuang-zi (c. 369B.C.-295B.C.) expressed his view on machines by disagreeing with his Confucian rival in his famous book *Zhuang-zi*:

[A famous student of Confucius] Zi-gong recommends using a shadoof for irrigation purposes, explaining its efficiency and the remarkable results it can achieve. However, [a Taoist adherent] Han-yin Zhang-ren disagreed, stating that ‘I purposefully do not use a machine...because it makes people dependent on it...which will be detrimental to man’s innate independence and pure spirit.’ Confucius provides his opinion when Zi-gong told him the Taoist mentality theory as follows: ‘for those who pursue only their inner life and inner truth, Han-yin Zhang-ren’s remarks seem to be quite

⁹⁴ Yue Ai-guo has provided a detailed research on this matter. Yue, *Confucianism and Traditional Chinese Science and Technology*, p. 23. Also see Ma Zhong-geng, ‘Zhongguo gudai kexue jia zhengti qingkuang tongji yanjiu (A Statistic Survey of the Overall Condition of the Per-modern Chinese Scientists)’, 1 *Shixue yuekan (Journal of History)* 35 (2004), pp. 35-36; Dai Jian-ping, ‘Zhongguo gudai kexue jia lishi fenbu de tongji fenxi (A Statistic Survey of the Pre-modern Chinese Scientists)’, 6 *Ziran bianzheng fa tongxun (Journal of Dialectics of Nature)* 48 (1997), pp. 48-54. However, examinations of Confucianism are not to exclude the scientific and technological contributions of Taoism and Buddhism but to reveal a much wider horizon of Chinese perspectives on innovation.

reasonable. However, besides their inner life, men live, keeping a relation to the outer world.’⁹⁵

Zi-gong’s strong interest in the irrigation device indicates a typical people-focused Confucian mind: if an invention can benefit society, why should it be ignored?⁹⁶ The concepts of newness and innovation are very clearly understood since antiquity. The Confucian canon *Shu Jing* (Book of History) gives its judgements as follows:

While in the employment of men we seek the old friends, in the employment of tools we seek, not the old ones, but the new.⁹⁷

Seeking newness guided various Chinese inventors throughout Chinese history. For instance, a third-century great inventor Ma Jun invented a new weaving machine, which reduced the number of footsteps from fifty to twelve, because ‘he detested the obvious inefficiency of the old model’.⁹⁸ Qi Ji-guang (1528-1587), a meritorious general of the Ming dynasty expressed his unhesitating opinion towards newness in his military book as follows: ‘Weapons vary from the past to the present. They change in line with the requirements of war. Old weapons which can still be used shall be updated; unusable ones shall be altered; those inexistent must be invented.’⁹⁹

A utilitarian Confucian mind often has an itch to absorb newness as far as possible. In 1334, Chen Chun, a member of the Salt Commission of the Mongol Yuan, in his preface for *Aobo Tu* (the boiling of the ocean waves), a book on the salt production techniques of the Lower Yangzi River, bemoaned the original author’s death and the incompleteness of such a state-of-the-art ‘database’ in this way: ‘[this book] is quite complete and detailed...but it is a pity that some newly invented techniques are not included.’¹⁰⁰ This attitude resulted in tremendous efforts being made to discover and innovate. A notable example is that Chinese rulers and doctors were very active in seeking and testing new

⁹⁵ *Tiandi pian, Zhuang-zi*. English translation is cited from Yosida Mitukuni, ‘The Chinese Concept of Technology: A Historical Approach’, 36 *Acta Asiatica* 51 (1979), pp. 51-52.

⁹⁶ The Confucian position against specious and deleterious inventions can only be construed to the extent that its utilitarian and people-focused perspective requires the inventions to serve the social benefits in a reasonable way rather than to violate the human society and its moral paradigm.

⁹⁷ *Pangeng shang, shangshu of Shu Jing*. Cited from Chen, *The Economic Principles of Confucius and His School*, p. 405.

⁹⁸ *Du Kui Zhuan, Weishu, Sanguo zhi*. Cited from Zhao Gang & Chen Zhongyi, *Zhongguo jingji zhidu shi* (History of China’s Economic System), Beijing: Zhongguo jingji, 1991, pp. 275-76.

⁹⁹ Qi Ji-guang, *Jizhen fenshou*, in *Ming jingshi wenbian*, vol. 349. Cited from Xu Xin-zhao, ‘Woguo Mingdai de huoqi wenxian jiqi kexue chengjiu (Firearms Records of the Ming China and their Scientific Achievements)’, 2 *Xueshu jie* (Academics) 38 (1999), p. 38.

¹⁰⁰ Yoshida Tora, *Salt Production Techniques in Ancient China: the Aobo tu*, trans. by Hans Ulrich Vogel, New York: E.J. Brill, 1993, p. 156. The above texts are translated according to the photocopy of the original texts provided in Yoshida’s book.

remedies to respond to the unsolved medical impasse and disease varieties.¹⁰¹ Older pharmacological writings were given critical scrutiny rather than reverence towards the halo of antiquity surrounding them. A thirteenth-century physician Chang Yuan-su said quite bluntly: ‘ordinarily, when one is treating diseases, one does not use the old remedies... The past and the present follow different tracks, and to use the old remedies for the new illnesses is ineffective.’¹⁰²

Traditional Chinese literatures commonly applied a laudatory tone in describing inventions and recording them in official documents. The detailed record of the invention of paper in *Hou Han Shu* (*The Book of Latter Han*) is representative:

Since the distant past, literatures are carved on corded bamboo slips. Silk is also employed as paper for writing. Bamboo slips are too heavy and silk is too expensive. Both of them are not convenient. [A eunuch] Cai Lun creatively mixed tree rind, hemp cloth and fishnet together to make papers. In the year of 105 A.D., he presented the invented paper to the Emperor. The Emperor admired his talent. In no place is his paper unknown. [His invention] is respectfully addressed as ‘Paper of Marquis Cai’.¹⁰³

The joy and admiration towards innovations can also widely be seen in the records of numerous local gazettes throughout Chinese history. An eighteenth-century Suzhou gazette was very proud of its local handicrafts: ‘Some artisans from Anhui province can make exquisite wooden equipments, which are unmatched by those produced under mediocre techniques. Yuan You-zhu and Wu Si are the representatives of our contemporary excellent artisans.’¹⁰⁴ Applause to newly invented silk products is always exclamatory in this silk-making centre. Some new types of silk were praised as ‘dazzling colors and incomparable techniques that remarkably exceed those of the past’.¹⁰⁵

As will be discussed in Chapter Five, the Chinese showed notable respect to inventors, which to a certain degree stimulated creative enthusiasm. What is noteworthy here is that inventors are commonly considered as geniuses with exceptional, innovative brains. *Nong*

¹⁰¹ Mark Elvin, *The Pattern of the Chinese Past: A Social and Economic Interpretation*, California: Stanford University Press, 1973, p. 188.

¹⁰² Miyashita Saburō, ‘Sō-Gen no iryō’ (Medical Care in Sung and Yuan), in *Yabuuchi*, 1967, p. 127. For its English translation, see Elvin, *The Pattern of the Chinese Past*, p. 185.

¹⁰³ *Cai Lun zhuan, Hou Hanshu*. Cited from Song Zhi-min, *Handai shougong ye* (*Handicraft Industry of the Han Dynasty*), Chengdu: Bashu shushe, 1992, p. 123.

¹⁰⁴ Cao Yun-yuan, *Liezhuan yishu yi, Wuxian zhi*, Vol. 75/A. Cited from Duan Benruo & Zhang Qifu, *Suzhou shougongye shi* (*History of Suzhou’s Handicraft Industry*), Nanjing: Jiangsu guji, 1986, p. 86.

¹⁰⁵ Liu Guoliang, *Zhongguo gongye shi* (*History of China’s Industry*), Nanjing: Jiangsu kexue jishu, 1990, p. 426.

Shu highly evaluated the inventor of *tongche* (noria), saying that men's wisdom can create such an efficient machine far surpassing human labour.¹⁰⁶ A fifth-sixth century scientist and inventor Zu Geng-zhi was characterized by the official history *Nan Shi* (The History of the Southern Dynasties) as a man 'with ingenious mind who has explored the most exquisite and abstruse knowledge and exceeded [the ancient greatest inventors such as] Chu and Lu Ban.'¹⁰⁷ Liu Jing-yi was praised by a famed poet Ji Han (203-306) in his poem *Ba mo fu* (The Ode of Eight Millstones) for his 'extreme cleverness and uniqueness'.¹⁰⁸ He Chou who re-invented the lost ancient technology of colored glaze was described by the official history *Sui Shu* (The History of the Sui Dynasty) as a man 'with superb ingenuity and wisdom'.¹⁰⁹ In his highly original medicine landmark *Ben Cao Gang Mu* (The Compendium of Materia Medica), the great physician and herbalist Li Shi Zhen (1518-1593) praised Su Song (1020-1101), the statesman-inventor of the Heavenly Astronomical Clock and also a reputed medical expert, as a man with talent and novelty.¹¹⁰

Respecting inventors also has a double significance: it can inspire further innovations. The stele of the Suzhou Weaving Machine Temple erected in 1792 provided such an understanding as follows:

Our nation has its tradition to commemorate those who have contributed to our society... Therefore, every sagacious, virtuous and talented person who has contributed to the people shall be enshrined for ever... According to *Huai Nan-zi* (Book of the Prince of Huai Nan), [the reputed official of pre-historical times] Bo Yu is the originator of making cloth... His contribution extends all over the empire and our excellent talents shall keep improving and make cloth more exquisite.¹¹¹

¹⁰⁶ Yosida, 'The Chinese Concept of Technology', p. 62; 65.

¹⁰⁷ *Benzhuan, Nan shi*. Tong Shu-ye, *Zhongguo shougongye shangye fazhan shi* (The History of the Development of China's Handicrafts Industry and Commerce), Jinan: Qilu shushe, 1981, pp. 74-5.

¹⁰⁸ *Quan Jin wen*, Vol. 65. Cited from Zhu Ci-shou, *Zhongguo gudai gongye shi* (History of Traditional China's Industry), Shanghai: Xuelin chubanshe, 1988, p. 342.

¹⁰⁹ *He Chou zhuan, Sui shu*, Vol. 68. Cited from Zhu, *History of Traditional China's Industry*, pp. 376-7.

¹¹⁰ Zhao Qiu-li, 'Beisong jiechu de kexue jia Su Song (The Distinguished Scientist Su Song of the Northern Song Dynasty)', 1 *Kaifeng daxue xuebao* (Journal of Kaifeng University) 23 (1995), pp. 23-24. For the spectacular achievements of Su Song, see Joseph Needham, *Heavenly Clockwork: the Great Astronomical Clocks of Medieval China*, London: Cambridge University Press, 1960.

¹¹¹ 'Chongjian Sucheng jishen miao bei ji (The Stele for the Re-building of the Weaving God Temple of Suzhou)', in *Ming Qing Suzhou gongshangye beike ji* (Collection of Suzhou's Industrial and Commercial Epigraphs in the Ming and Qing Dynasty), ed. by Suzhou History Museum, History Department of Jiangsu Normal College and Institute of Ming and Qing History of Nanjing University, Nanjing: Jiangsu renmin, 1981, p. 23.

It is often argued that Chinese society was rather conservative and hostile to new technologies. A conventional comment is that at the initial stage when Paper of Marquis Cai was invented, Chinese intellectuals despised the paper significantly because it was inferior to silk. To a certain extent, this could be true in that writing on silk can achieve much higher aesthetic results as compared with primitive paper. However, the significance of inventing paper, as has been praised in *The Book of Latter Han*, is not a matter of aestheticism but economics and convenience: because paper is much cheaper than silk and much lighter than bamboo slips, it benefits society much more. In addition, it is noteworthy that bamboo slips rather than silk should be compared with paper in that bamboo slips were widely used but silk was only used for very special and limited purposes.¹¹²

Another widely cited evidence to condemn the Chinese fatuity of depreciating innovation is that Bi Sheng's great invention of the movable printing blocks in the twelfth century was not continued after his death. However, the reason for not using Bi's invention is largely technical in that his movable blocks were not mature enough to support massive printing. During the Ming and Qing times, efforts were made to improve the techniques of movable blocks. Private publishers such as Hua's family in Jiangnan employed metal movable types for printing. The royal publishing house of the early Qing produced a huge amount of metal movable blocks to print many valuable books.¹¹³ There are some other reasons explaining why China used woodcut for long. For instance, woodcut makes possible the use of a wide variety of calligraphic styles, much liked by the Chinese, lending to the printed page an individuality which movable types could not give; it is simpler and more economical to make in a country where skilled labour was so abundant and inexpensive.¹¹⁴ All these reasons are practical rather than philosophical and are not supportive to the view that the Chinese way of thinking blindly adheres to the past and opposes innovative ideas.

It is widely suggested that scientific and technological evolution fell into decline during the Ming (1368-1644) and Qing (1644-1912) dynasties. It seems that the atmosphere of creative and open-minded geniuses disappeared. In that period, Confucianism in practice did exert a negative influence on innovation. Scientific and technological education,

¹¹² For a discussion of the popularity of silk and bamboo slips, see Chen Jing, 'Dong Han qingshi Cai Lun faming de zhi ma (Did the Eastern Han Dynasty Despise the Paper Invented by Cai Lun)?', 1 *Chuban yanjiu (Publishing Studies)* 70 (1999), pp. 70-2.

¹¹³ Shiow-jyu Lu Shaw, *The Imperial Printing of Early Ch'ing China, 1644-1805*, San Francisco: Chinese Materials Center, 1983, p. 120.

¹¹⁴ Kuang-Ch'ing Wu, 'Ming Printing and Printers', 7 *Harvard Journal of Asiatic Studies* (1943), p. 210.

which constituted a significant part of imperial examination in the former dynasties,¹¹⁵ was replaced mainly by literature, philosophy and politics. Astronomy and mathematics did not engage the interest of most Ming intellectuals. This situation was so dismal that even the emperors felt compelled to order relevant students to make special efforts to learn.¹¹⁶ Unfortunately, by Ming times there were few left who could understand the more advanced positional algebra of the earlier period.¹¹⁷

However, there are other reasons accounting for the stagnancy of invention. Needham's comments on the pre-Ming inventions and their superiorities over even the seventeenth-century European techniques suggest a phenomenon that the Chinese innovative achievements had already reached an apex that the pre-modern science itself was unable to exceed. For instance, the processes of porcelain manufacture were already highly developed before the Ming, resulting in fundamental difficulties in making further breakthrough.¹¹⁸

Social demand for inventions in the economic fields may be less significant as compared with earlier period. As Mark Elvin suggested, innovations in the economic fields in general appear when there is effective customer demand to make them profitable and an adequate supply of materials and services to make them feasible. The surplus labour forces and the scanty resources of the late imperial China may have shifted the social demand from innovation to labour-intensive models.¹¹⁹ For instance, the most important 'innovative' changes in the porcelain industry centre Jingdezhen were in organization, notably in the development of a fine division of labour, rather than in technology.¹²⁰

The side effects of imperial examination and the technological bottleneck do not suggest that Confucian-bureaucrats were entirely uninterested in science and technology. For

¹¹⁵ Zhou Han-guang, 'Shilun Sui Tang shiqi de kexue guan (On the Scientific and Technological Understandings of the Sui and Tang Dynasties)', 3 *Zhongguo zhexue shi (History of Chinese Philosophy)* 18 (1997), pp. 18-24. Thomas H. C. Lee, *Education in Traditional China*, Leiden: Brill, 2000, p. 50. Elvin, *The Pattern of the Chinese Past*, pp. 180-1.

¹¹⁶ Li Yen, *Shu-hsüeh chiao-yü*, Quoted Lee, *Education in Traditional China*, p. 524, with modification.

¹¹⁷ Elvin, *The Pattern of the Chinese Past*, p. 194.

¹¹⁸ Michael Dillon, *A History of the Porcelain Industry in Jingdezhen*, PhD dissertation, University of Leeds, 1976, p.11. For Needham's descriptions, see, e.g., Joseph Needham, *Clerks and Craftsmen in China and the West: Lectures and Addresses on the History of Science and Technology*, Cambridge: Cambridge University Press, 1970, p. 27.

¹¹⁹ Mark Elvin, 'Why China Failed to Create an Endogenous Industrial Capitalism: A Critique of Max Weber's Explanation', 13 *Theory and Society* (1984), pp. 383-4. The problem of labour sometimes makes technology retrograde. In the sugar industry, beyond the dramatic shift to the two-roller cane crusher, there was a consistent thrust toward modification of the technology which ultimately made it possible to accommodate sugar manufacturing within the organization of labour imposed by the small-scale peasant economy of the Qing. Sucheta Mazumdar, *Sugar and Society in China: Peasants, Technology, and the World Market*, Cambridge (Mass.): Harvard University Asia Center, 1998, pp. 190-91.

¹²⁰ Dillon, *A History of the Porcelain Industry in Jingdezhen*, p. 81.

many officials, scientists and engineers who were directly involved in technological matters, their ambition of seeking newness to promote the people's benefits did not dwindle; as humorously articulated by the distinguished Ming official Qiu Jun (1421-1495), a reputed prime minister of the late Ming, at least they had another Confucian idea of '*ren ding sheng tian*' (man can conquer heaven [the nature]):

Although the soil nature may be inhospitable, we should always think if our efforts are sufficient enough to overcome the disadvantages of the soil nature. If human wisdom is adequately developed, we can change heaven. Why should we be afraid of earth?¹²¹

Inventions still emerged from time to time. Techniques in general were improved notably and new tools and machinery were continuously invented, if necessary, in various industries.¹²² In the porcelain industry of Jingdezhen, innovations can be found in ornamentation and glaze-blowing which enabled the potters to meet the more sophisticated buyers.¹²³ The surge in demand for Chinese sugar in the seventeenth century coincided with the period during which the most rapid changes of sugar technology took place.¹²⁴ Continuous efforts were made to create more inventions to improve the living condition of farmers. Windmill for water conservancy purposes were invented in the rich Kiangnan of lower Yangzi River.¹²⁵ To a great extent, new farming tools, fertilizers, species, and planting techniques were invented or improved well in tune with social requirements and local specialities.¹²⁶

Weaving tools were progressively reformed. As recorded in *Nongzheng quanshu* written by the respectful Ming official-scientist Xu Guang-qi (Paul Xu, 1562-1633), 'by using Jurong-style weaving machine [invented in Jurong city in lower Yangzi River], one can replace four labours; by using Taichang-style weaving machine [invented in Taichang city of Suzhou], two person can replace eight.'¹²⁷ Innovations even occurred with very rapid speed in some branches of textile industries where embryonic capitalism appeared.

¹²¹ Xu Guang-qi, *Nongzheng quanshu*, Vol. 25. Cited from Li Bo-zhong, *Duo shijiao kan Jiangnan jingji shi* (*Examining the Economic History of Jiangnan from Multi-Perspectives*), Beijing: Sanlian shudian, 2003, p. 133.

¹²² Angela Ning-jy Sun Hsi, *Social and Economic Status of the Merchant Class of the Ming Dynasty, 1368-1644*, London: University Microfilms International, 1972, p. 44.

¹²³ Dillon, *A History of the Porcelain Industry in Jingdezhen*, p. 90; 98; 206. Rodzinski, *The Walled Kingdom*, p. 175. Tsing Yuan, 'The Porcelain Industry at Ching-te-chen 1500-1700', 6 *Ming Studies* (1978), p. 49.

¹²⁴ Mazumdar, *Sugar and society in China*, pp. 138-160.

¹²⁵ Li, *Examining the Economic History of Jiangnan from Multi-Perspectives*, pp. 49-51.

¹²⁶ Li, *Examining the Economic History of Jiangnan from Multi-Perspectives*, pp. 51-67. Zhu Si-guang & Guo Yu-hua, 'Qingchao Kangxi zhongdao jiqi jishu kaolue (The Manchu Emperor Kangxi's Rice Planting and his techniques)', 3 *Shenyang nongye daxue xuebao* (*Social Science Journal of Shenyang Agricultural University*) 238 (2000), pp. 238-39.

¹²⁷ Xu Guang-qi, *Nongzheng quanshu*, Vol. 35.

As recorded in a sixteenth-century local gazette of Huzhou (in lower Yangzi River), abundant new silk products were swiftly created in some Huzhou towns in just less than fifty years.¹²⁸ Suzhou silk industry may have had a larger innovative capability because the newly created products were increasingly exquisite, dazzling and difficult to be calculated.¹²⁹

3.5. European knowledge and Confucian enthusiasm for new creativity

The Chinese creative mind is not only vigorous in regenerating its own culture, but it is also able to absorb nutrition from other cultures. In medieval times, Buddhism had been a new source of inspiration for the development of Neo-Confucianism and various arts that flourished in East Asia. Since the Ming and Qing dynasties, China started to enter another unusual period in which European Jesuits ferried to China at a considerable scale and were ‘comfortably accommodated’ by the Chinese.¹³⁰ The advent of Jesuits seems to be a coincidence with a particular epoch, in which many noted Confucian scholars agonized about the decline of Chinese native science and were enthusiastic about exploring new ideas to revive China’s then scientific and technological prosperity. It seems that the traditional utilitarian mind was working on an ‘aggressive’ level, making that period being labeled as the ‘epoch of *shixue* (concrete studies or practical learning)’.¹³¹

Documents recording the encounter between Jesuits and Chinese literati are voluminous, indicating a phenomenon that many, if not most, reputed Confucian scholars and the imperial government as well were very interested in the novelty of European knowledge.¹³² Significant amount of books were translated or written by the missionaries who were appointed as important and high-ranking officials to undertake the scientific

¹²⁸ *Wuchan, Huzhou fuzhi*, Vol. 41 (Qianlong Reign). Cited from Liu, *History of China’s Industry*, p. 427.

¹²⁹ *Wujiang xianzhi*, Vol. 5 (Qianlong Reign). Cited from Liu, *History of China’s Industry*, p. 535.

¹³⁰ Ann Waltner, ‘Demerits and Deadly Sins: Jesuit Moral Tracts in late Ming China’, in *Implicit Understandings: Observing, Reporting and Reflecting on the Encounters between Europeans and Other Peoples in the Early Modern Era*, ed. by Stuart B. Schwartz, New York: Cambridge University Press, 1994, p. 447.

¹³¹ The research of *shixue* is becoming increasingly important in China. The translation of *shixue* to concrete studies is based on Professor Achim Mittag’s translation. See Achim Mittag, ‘The Excitement about Enlightenment -- On the Notion of “Enlightenment” (*qimeng*) in Chinese Twentieth-Century Historiography’, paper presented at the Workshop on Modern Chinese Historiography and Historical Thinking, Heidelberg, May 23-27, 2001.

¹³² John B. Henderson, ‘Ch’ing Scholars’ Views of Western Astronomy’, 46 *Harvard Journal of Asiatic Studies* (1986), pp. P121-12. Gottfried Wilhelm Leibniz (1646-1716) wrote in his *Novissima Sinica* published in 1679 that the Chinese and Chinese empire welcomed European science. See Shi Tong-biao, *Zhongguo falü wenhua dui xifang de yingxiang* (*The Influences of Chinese Legal Culture on the West*), Shijiazhuang: Hebei renmin, 1999, p. 106. In European sources, a large part of the evidence of Chinese interest in Western science and technology can be found in Jesuit correspondence from Beijing. Joanna Waley-Cohen, ‘China and Western Technology in the Late Eighteenth Century’, 98 *The American Historical Review* (1993), pp. 1529-30; 1533-34.

and technological tasks of the empire.¹³³ In the majority of Confucian literatures, the morally well-educated Jesuits equipped with new, novel knowledge were described as equally respectful gentlemen. As the famous Ming scholar Xie Zhao-zhe (1567-1624) wrote, ‘To the west of the Buddhist India, there is a Christian Kingdom whose people are as civilized and elegant as we are.’¹³⁴

Despite several Chinese Catholic converts such as Xu Guang-qi, however, the majority of Confucian scholars were not interested in the exotic religion *per se* but the ‘newness’ of the scientific and technological knowledge imported by the Europeans. The Chinese seemed to be very humble in learning. For instance, although Chinese expertise in cartography was already considerable, they particularly admired the greater precision of Western techniques for drawing and reproducing maps.¹³⁵ For Chinese scholars, if the knowledge was helpful, there would be no necessity to expel them simply because they were foreign or different with the old way of China. The fact-based and utilitarian approach was deeply rooted and explicitly expressed by the overwhelming majority of Confucian scholars. As the distinguished Qing mathematician Mei Wen-ding (1633-1721) articulated:

If a method is adoptable, why does it matter that it originates in China or elsewhere; if the truth is clear, why should we distinguish it as old or new?¹³⁶

For these Confucian scholars, there is an ultimate purpose behind learning and rediscovering. As Xu Guang-qi indicated, the goal of interaction (*hui-tong*) [between Chinese and European knowledge] is to eventually excel (*chao-sheng*) [the existing ones]¹³⁷. This means that they were not merely satisfied with blindly absorbing but yearned to doubt and create more. As the reputed astronomer Wang Xi-chan (1628-1682) indicated, ‘The Western knowledge must be tested; it is not proper that they are treated as unchangeable rules, making the creative progress consequently stop.’¹³⁸

When reading the seventeenth-century history of Chinese scientific nativism, some commentators incline to construe this scepticism as a nativist arrogance which eventually

¹³³ Waley-Cohen, ‘China and Western Technology in the Late Eighteenth Century’, pp. 1530-5.

¹³⁴ Xie Zhao-zhe, *Wu za zu*, Beijing: Zhonghua shuju, 1959, p. 120.

¹³⁵ Waley-Cohen, ‘China and Western Technology in the Late Eighteenth Century’, pp. 1530-35.

¹³⁶ Mei Weng-ding, *Qiandu celiang*, Vol. 2, Cited from Gong Shu-duo (ed.), *Zhongguo jindai wenhua gailun* (*An Introduction of Early-modern Chinese Culture*), Beijing: Zhonghua shuju, 2002, p. 90.

¹³⁷ He Zhao-wu, *Zhongxi wenhua jiaoliu shilun* (*History of the Cultural Exchanges between China and the West*), Beijing: Zhongguo qingnian, 2001, p. 98.

¹³⁸ He, *History of the Cultural Exchanges between China and the West*, p. 100.

hindered the innovative progress. However, direct expressions of nativism as those articulated by Lü Liu-liang (1629-83) were rare in the works of major Confucian scholars. To a great extent, nativist views rose when they were used to serve other purposes.¹³⁹ The fierce reaction towards Jesuits in 1644 was a political incident because it happened when a conservative Manchu political authority, the Oboi Regency, came to power: since Oboi was averse not only to the Sinification of Manchu institutions but also to the Westernization of court astronomy, astronomical reactionaries, led by Yang Guang-xian (1597-1669) and the Muslim official Wu Ming-xuan, were able to displace the Jesuits and their accomplices as court astronomers. However, this was rather ephemeral as the issue was decisively resolved against the reactionaries by an eclipse prediction contest held in 1669, the year when Emperor Kang-xi (1654-1722) got into the saddle.¹⁴⁰ It would not be changed into radical nationalist gestures until the mid-nineteenth century, when China's gate was opened by the Western military power, making ethnographies and much else all too explicit.¹⁴¹

It could be argued that the emergence of nativism *per se* in academic fields is to some degree a result of reasonable sceptical researches. Most scholars who showed interest in European knowledge were not unqualified in scientific studies; nor were they obscurantists.¹⁴² Rather, their scepticism deepened when their understanding of the knowledge presented by Jesuits developed. This happened because European scientific and technological knowledge introduced by the Jesuits was highly medieval and then did not accord with the creative trends of the Ming China.¹⁴³

The most distinctive characteristic of the Ming-Qing *shixue* in the scientific and technological sphere is to seek sophisticated theories to guide further breakthroughs in creativity and innovation rather than to merely comprehend practical techniques. For instance, Xu Guang-qi's intention of studying European geometry is to ultimately introduce mathematics into experimental science,¹⁴⁴ which is deemed to be the foundation of modern science and further technological breakthrough.¹⁴⁵ However,

¹³⁹ Henderson, 'Ch'ing Scholars' Views of Western Astronomy', pp. 143-48.

¹⁴⁰ Henderson, 'Ch'ing Scholars' Views of Western Astronomy', pp. 137-39.

¹⁴¹ Waltner, 'Demerits and Deadly Sins: Jesuit Moral Tracts in late Ming China', p.447.

¹⁴² Henderson, 'Ch'ing Scholars' Views of Western Astronomy', pp. 143-8.

¹⁴³ He, *History of the Cultural Exchanges between China and the West*, p. 110.

¹⁴⁴ Yuan Yuan (ed.), *Chouren zhuan*, Vol. 32 (Xu Guang-qi). Cited from He, *History of the Cultural Exchanges between China and the West*, p. 80.

¹⁴⁵ Joel Mokyr argues that Chinese would have had failed to generate industrial revolution spontaneously because Chinese way of thinking cannot develop modern scientific theories, which are the epistemic bases of modern technology. Mokyr mentioned Needham's argument about the Five Elements Theory, suggesting that Chinese scientific thinking was entirely pre-modern. Joel Mokyr, 'Why was the Industrial Revolution a European Phenomenon?', presented to the Conference on The Rule of Law, Freedom, and Prosperity, George Mason University, November 2001, online at

European scientific theory presented by the Jesuits seems to be problematic and plausible. As the famed scientist and philosopher Fang Yi-zhi (1611-1671) indicated, '[the Jesuits] are good at some techniques rather than theories, and their techniques are also deficient'.¹⁴⁶

For these Chinese scientists, Jesuits' theories were far more than profound,¹⁴⁷ and sometimes not necessarily superior to the Chinese native theory.¹⁴⁸ The Jesuits' theoretical deficiencies might be attributed to their religious belief, which made the morally respectful Jesuits limit their comprehension of scientific knowledge within pre-modern scope.¹⁴⁹ The Ming-Qing scholars were well aware of the incompatibility between science and theology. Wang Xi-chan articulated quite sharply: 'the enlightened gentlemen dislike talking about God-created [science], which are astrologists' superficial perspectives. Why are the Europeans, who are so accomplished in astronomy, so deluded?'¹⁵⁰ But unfortunately history does not give Chinese scholars many opportunities to approach European modern science. In several chances they missed out not because they rejected novelty but because they were misled in terms of the information available. For instance, Chinese scholars refused to agree with the new heliocentric idea because the Jesuits misrepresented Copernicus's achievements so as to give their Chinese readers the impression that in principle there was no disagreement between the world systems of Copernicus and Ptolemy, a column of God.¹⁵¹

The Chinese desire to excel and create was further hampered by the decrease of Sino-European exchanges after a papal mission in 1705-1706 attempting to extend Rome's religious authority over Chinese Christians and China's consequent response of cramping the freedom the Jesuits enjoyed.¹⁵² In addition, the Manchu rulers themselves were not interested in science and technology in full sail. The Kangxi emperor who showed great interests in science confined scientific activities in limited circles and failed to effectively

www.faculty.econ.northwestern.edu/faculty/mokyr/Zywicki.PDF (last visited 5th December 2006). It seems that Mokyr is not aware of the fact-based analytical methodology of Neo-Confucianism and *shixue*, which had arrived at the eve of theoretical breakthrough.

¹⁴⁶ Fang Yi-zhi, 'Preface', *Wuli xiaozhi*. Cited from He, *History of the Cultural Exchanges between China and the West*, p. 80.

¹⁴⁷ He, *History of the Cultural Exchanges between China and the West*, p. 80.

¹⁴⁸ Those who disdain Chinese theory of Five Elements should better remember that it is not until the seventeenth century when Europe abandoned Aristotle's Four Elements did the Five Elements make Chinese scientific thinking look outdated. See Needham, *History of Scientific Thoughts in Pre-modern China*, p. 381.

¹⁴⁹ Joseph Needham, *Science and Civilization in China*, p.450.

¹⁵⁰ Yuan Yuan (ed.), *Chouren zhuan*, Vol. 34 (Wang Xi-chan). Cited from He, *History of the Cultural Exchanges between China and the West*, p. 80.

¹⁵¹ N. Sivin, 'On China's Opposition to Western Science during Late Ming and Early Ch'ing', 56 *Isis*, (1965), pp. 202-23; Waley-Cohen, 'China and Western Technology in the Late Eighteenth Century', p. 1535; 1543.

¹⁵² Waley-Cohen, 'China and Western Technology in the Late Eighteenth Century', p. 1532.

promote them into the society.¹⁵³ That the Qianlong emperor (1711-1799) turned down a proposal of replacing swordplay in the military examinations with new musket¹⁵⁴ largely reflects a standard Manchu ambivalent thinking: power, including particularly the scientific and technological power, granted to the Han-Chinese must not exceed the extent to which the Han-Chinese would not be able to kick this alien conqueror out. The Manchu rulers' suppression and killing against the Han-Chinese compelled the majority of Chinese to remain in the fields of archaeology and philology, leaving other fields less ploughed.¹⁵⁵ It is not until the middle of the nineteenth century that China obtained another chance to encounter the West and release their innovative talent, but only in an extremely painful way.

3.6. Conclusions

In addition to respecting the past, creativity played a fundamental and crucial role in traditional China. Confucianism itself is a dynamic paradigm of connecting the past and the present. The past constituted an experiential and substantial foundation of the present but it did not hinder necessary creativity of the present. Sometimes, quite adaptive to human nature, the past became an excuse for promoting creative and even revolutionary changes in the present.

In the sphere of literature, creativity or originality was highly praised by Chinese authors. Newness was viewed as something of an exceptional level that can advance the literary aesthetics and appreciation. Scientific and technological innovation benefited from not only the fact-based and sceptical approach of Confucianism but also its utilitarian perspective viewing innovation as vital to the continuous improvement of the livelihood of the people.

As will be demonstrated in the next chapter, the Chinese notion of creativity impeded little the emergence of proto-intellectual property notions and practices and, in some cases such as copyright, it even accelerated legal protection. Moreover, the Chinese notion of creativity is also useful to understand the importance of the public interest of using knowledge, which will be examined in Chapter Five and Chapter Eight.

¹⁵³ Xi Ze-zong, 'Lun Kangxi kexue zhengce de shiwu (On the Mistakes of Kangxi's Scientific Policy)', 1 *Ziran kexue shi yanjiu (S Studies in the History of Natural Science)* 18 (2000), pp. 18-29.

¹⁵⁴ Elvin, *The Pattern of the Chinese Past*, pp. 107-08.

¹⁵⁵ Rozman, *The Modernization of China*, p. 196.

CHAPTER FOUR

Commodity Economy and Investing in Knowledge: Copyright and the Family-based Model of Craft Secrecy

We are worrying that [piracy] will seriously damage our mental efforts and investment... This Office hereby declares that [pirates] will be prosecuted and their printing blocks will be destroyed.

– A copyright judgement, the Song dynasty, 1238. ¹

So far, we have provided systematic analyses to demonstrate that neither Chinese legal or political regimes nor Chinese understanding of creativity could plausibly generate extreme hostility to intellectual property protection. This suggests that the limited availability of Chinese historical data of intellectual property development does not firmly support the argument of the non-existence of such development, or relatively, that such development was repelled by Chinese culture. It is therefore to commodity economy and the nature of knowledge products that we must turn for the explanation for the intellectual property concepts and practices which inevitably emerged and developed in tune with pre-modern China's cultural, commercial and technological evolution.

To start, let us revisit the nature of knowledge products associated with the growth of commodity economy discussed in Chapter One. Unlike tangible things, the most distinctive nature of intangible knowledge is that it can be infinitely and identically reproduced without detracting from the initial one. When knowledge is actualized as knowledge products such as books and machines, these products can also be duplicated infinitely and identically. A serious problem will immediately follow when knowledge creations or inventions are associated with investment, either in the form of money or mental creativity. Reproduction by a person other than the investor may damage the investment of the latter because without initial investment unauthorised copiers or, more conventionally, pirates can produce inferior copies to damage the investor's reputation and cheaper ones to compete with the investor in the market. Therefore, when human society evolved to a degree to which this problem inhered within the nature of knowledge

¹ For its original Chinese text, see Zhou Lin & Li Ming-shan, *Zhongguo banquan shi yanjiu wenxian* (*Historical Materials for the Studies of China's Copyright History*), Beijing: Zhongguo Fangzheng, 1999, p. 3.

and knowledge products became obvious, demands of protecting exclusive rights on intellectual products started to appear.²

This chapter investigates China's proto-intellectual property forms of copyright and the Family-based Model of craft secrecy. Analyses of these forms are based on a general understanding of intellectual property defined in Chapter One. Trademark will be examined separately in Chapter Six since it is quite different by its nature.

4.1. Commercial publishing vs. a mere control of mind

Well-trained scholars will not continue to uphold the Eurocentric pride of labelling Gutenberg as the first inventor of printing technology,³ but should, to quote the French Sinological authority René Étiemble, admit that 'Europe once borrowed something from China'.⁴ In China, printing technology was applied at a notable scale at least from the early ninth century because in 835 AD a decree was issued to ban the inaccurate private printing of calendars.⁵ Quite similar to its European counterpart where printing initiated from churches, in China printing initially appeared in Buddhist temples.⁶ Meanwhile, some private publishers engaging in reproducing calendars, poems and copybooks began to emerge.⁷ Since 932, the imperial government started a sixteen-year marathon to collate, carve and print nine Confucian canons, announcing the onset of large-scale official publishing. However, commercial publishing, either officially or privately, was not significant at that stage.⁸

² Cornish pointed out the importance of exclusive rights to knowledge production when it is associated with commerce, technologies and investment. W. R. Cornish, 'The International relations of Intellectual Property', 52 *Cambridge L. J.* 46 (1993), p. 47; 63.

³ Gunaratne in a brief essay criticized this conceit. He wrote, Kipling, a defender of British imperialism, found common grounds with Marx Weber and his myriad followers in laying the bedrock for a Eurocentric social theory. Instead of analyzing world history *holistically* and *horizontally*, they chose to do so partially and vertically. Vertical separation enabled the Eurocentric historians to trace the invention of printing to Gutenberg, c. 1450, as another manifestation of European *exceptionalism*. Shelton A. Gunaratne, 'Paper, Printing and the Printing Press: A Horizontally Integrative Macrohistory Analysis', 63 *Gazette* 459 (2001), p.461. For Chinese printing history, see T. F. Carter, *The Invention of Printing in China and its Spread Westward*, 2nd edn, revised by L. C. Goodrich, New York: The Ronald Press, 1955.

⁴ René Étiemble, *L'Europe chinoise*, Paris: Gallimard, 1989. Translated into Chinese as *Zhongguo wenhua xichuan ouzhou shi* (*History of the Cultural Transmission from China to Europe*), Geng Sheng (trans), Beijing: Shangwu yingshu guan, 2000, p. 34.

⁵ 'Wen-zong ji', in *Jiu Tang shu*, vol. 17/B. Cited from Fang Hou-shu, *Zhongguo chuban shihua* (*The History of China's Publishing*), Beijing: Dongfang, 1996, p. 77. Zhang Xiu-ming argued that printing technology was invented in about 636 AD. See Zhang Xiu-ming, *Zhang Xiu-ming yinshua shi lunwen ji* (*Academic Essays of Zhang Xiu-ming on China's Printing History*), Beijing: Yinshua gongye, 1988, pp. 32-47.

⁶ Fang, *The History of China's Publishing*, pp. 82-4.

⁷ Fang, *The History of China's Publishing*, p. 87.

⁸ Feng Dao, the primary minister suggested that official printed books should be sold on the market. A private printing Wu Zhao-yi became rich by printing and selling books. See Fang, *The History of China's Publishing*, p. 96; p. 98; pp. 93-98.

Official printing swiftly spread across the country since the late tenth century.⁹ A notable consequence is that in 1005 the emperor was told when he visited the *Guozi jian* (Directorate of the National Youth) that printing blocks had increased from four thousand, a record of the beginning of the Song (960-1279), to more than one hundred thousand in just forty years.¹⁰ Enthusiasm for education and printing also promoted the flourishing of scholarly or private publishing, which, as the Song poet Lu You (1125-1210) joyfully revealed, ‘became the top favourite of the contemporary scholar-bureaucrats’.¹¹ There were partially pecuniary motives of the official and scholarly printing but such publishing activities were still not on an industrial scale.¹²

Commercial publishing began to boom from the eleventh century. Many publishing centres grew up in major provinces or cities. Classics, dictionaries, histories, geographies, medical texts, encyclopaedias, collections of anecdotes, school primers, poetry anthologies, plays and ballads, and novels were published daily and distributed everywhere.¹³ Glancing over the long list of publishers provided by two noted scholars Zhang Xiu-ming and Lucille Chia helps us to believe that in the Song dynasty (960-1279) myriads of new pages were printed every day and the royal collections were even housed by numerous ordinary families.¹⁴ The Ming (1368-1644) commercial publishing was even more terrific: one could easily buy thousands of books in the book market as long as he brought enough money.¹⁵ The amounts were so huge that, as some Ming literati joked, ‘if the books were used as charcoal, the price of firewood would fall sharply’¹⁶ and ‘books will not be able to be stored even if we make the whole earth as a bookshelf!’¹⁷ Cheap books such as those from Jianyang region of Fujian and high quality books printed in Kiangnan (southeast of the Yangtze River) were distributed not only to the whole empire but also to Japan and Korea.¹⁸ For instance, in 1771, 139 trunks of books were

⁹ Fang, *The History of China's Publishing*, p. 215. Song Yuan-fang and Li Bai-jian, *Zhongguo chuban shi* (*China's Publishing History*), Beijing: Zhongguo shuji, 1991, p. 89. Also see Lucille Chia, *Printing for Profit: The Commercial Publisher of Jianyang, Fujian (11th–17th Centuries)*, Cambridge: Harvard University Press, 2002, p. 118.

¹⁰ Song shi, vol. 431. Cited from Zhang Xiu-ming, *Zhongguo yinshua shi* (*China's Printing History*), Shanghai: Shanghai renmin, 1989, p. 62.

¹¹ Zhang, *China's Printing History*, p. 56.

¹² Chia, *Printing for Profit*, p. 6.

¹³ Chia, *Printing for Profit*, p. 5.

¹⁴ Zhang, *China's Printing History*, pp. 57-58; pp. 70-71; p. 79; pp. 88-91; pp. 342-48; pp. 359-60; pp. 365-66; pp. 369-72; pp. 375-76; pp. 378-83; pp. 550-51; pp. 553-54; pp. 556-57. Some shops listed in the Qing only sold books. Chia listed over 100 print shops and over 400 individuals recorded as printers of one or more books produced in Jianyang of Fukien. This number was roughly the same as that in Nanjing. Chia, *Printing for Profit*, p. 154.

¹⁵ Song & Li, *China's Publishing History*, p. 102.

¹⁶ Song & Li, *China's Publishing History*, p. 102.

¹⁷ Cai Cheng, *Jichuang conghua*. Cited from Zhang, *China's Printing History*, p. 338.

¹⁸ Chia, *Printing for Profit*, p. 116.

loaded in six ships out of the total number of fifty-four sailing to Nagasaki.¹⁹ The imperial examination stimulated the commercial publishing industry²⁰, which must have attracted a large population of, for instance, four hundred thousand in the thirteenth century, a number that excludes those who prepared but failed to attend.²¹ As the following will demonstrate, the development of pre-modern China's publishing industry played a fundamental role in stimulating the emergence of copyright protection.

In addition to his ignorance of the significance of creativity in Chinese history, Alford pays little attention to the dynamics of pre-modern China's commercial publishing industry.²² His focus is only on the political reactions to the advent of printing technology. As he argues, since the invention of printing technology, all known examples of the Chinese government efforts in controlling unauthorised publishing 'seem to have been directed overwhelmingly toward sustaining imperial power'.²³ Although he succinctly reminds us somewhere that efforts of seeking copyright protection existed,²⁴ he does not provide ample evidence to illustrate the issue; nor does he put the issue in the context of commercial publishing.

What were the purposes of political control on printing? Of course in some cases such control was carried out to maintain the emperor's authority. For instance, as Alford argues, questions of time and astronomy were central to the emperor's assertion that he was the link between human and natural events,²⁵ making the uncontrolled printing of calendars a sensitive issue; imperial orders were sometimes made to eliminate heterodox

¹⁹ Oba Osamu, *Edo Jidai no Nichu hiwa (Sino-Japanese Secrets in Edo Times)*, Beijing: Zhonghua shuju, 1997, pp. 61-62. Li Bo-zhong, 'Ming Qing Jiangnan de chuban yinshua ye (Kiangnan Publishing Industry in the Ming and the Qing)', *Chinese Economic History Forum*, on-line at <http://www.guoxue.com/economics/ReadNews.asp?NewsID=2819&BigClassID=26&SmallClassID=46&SpecialID=65> (last visited 12th February 2005).

²⁰ For the commercial prosperity of examination references, see Hu Wen-hua, 'Mingchao shushi fanrong detese (The Speciality of the Prosperities of the Ming Book Market)', 1 *Chinese Economic History Studies* (2003), p. 96. J. L. Dull, 'The Evolution of Government in China,' in *Heritage of China: Contemporary Perspectives on Chinese Civilization*, ed. By Paul S. Ropp, Berkeley: University of California Press, 1990, pp.72-73.

²¹ As Chaffee indicated, the officially reported figure of the candidates for the Imperial Examination at a prefectural level was around 79,000 in the early 12-century and, as he estimated, the figure could increase to 400,000 in the middle of the thirteenth century under the Southern Sung's reign. John W. Chaffee, *The Thorny Gates of Learning in Sung China: A Social History of Examinations*. 2d edn., Albany: State University of New York Press, 1995, p. 35. Chia argues that this number does not include those who prepared for but did not take the Examination in a particular year. Chia, *Printing for Profit*, footnote 40, p. 353. Alford argues that the literary population in late imperial China is rather low because no more than 20 percent of Chinese were literate even by the early twentieth century. See William P. Alford, *To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization*, California: Stanford University Press, p. 19. However, his data does not disturb the fact that a huge book market existed with a huge number of customers.

²² Alford seems to overlook the significance of China's reading population. Alford, *To Steal a Book*, p. 19.

²³ Alford, *To Steal a Book*, pp. 16-7.

²⁴ For instance, see Alford, *To Steal a Book*, p. 14; 16; 17;

²⁵ Alford, *To Steal a Book*, p. 13.

ideas or works disparaging the dynasty.²⁶ As early as in 998 AD, an edict was issued to prohibit private reprints elsewhere²⁷ for the possible purpose of preventing ideological dissidence and even dynasty displacement. However, such political control on publishing, which in many cases was not entirely irrational, was not all-important; there were other types of control with more reasonable purposes.

Take the example of calendar printing first. It is very likely that the disarrayed printing of calendars affected the foundation of the empire, *i.e.*, agriculture, for it depended essentially on correct calendar. The dissension among printing editions that the Tang Xizong emperor encountered in 881 when he took refuge in Szechwan (Sichuan) from Huang Chao's rebellion suggests that the privately printed calendars did disturb the daily life of his subjects.²⁸ Although calendar printing was of vital importance, in practice the penalty for the offenders was not always harsh: in the tenth century it was merely the destruction of privately owned books. Under the Song, scholarly families connected with the bureaucracy could safely study the stars in private.²⁹ In latter periods, printing calendars by local governments and even ordinary people started to be allowed.³⁰

In most cases publishing control aimed to reduce the apparent fallacies of the texts from the low quality commercial printing. Such control came out of a worry that the erroneous books encouraged slipshod habit of lazy examinees and then jeopardized the certain statecraft they must master. This was revealed in a memorial of 1114, which reads: 'lazy students simply memorize without understanding by relying on some books written exclusively for the skills of examinations.'³¹ The situation would be worse when misprints belied the correct understanding of some fundamental elements of the existing knowledge. Consider a joke popular among the Song literati:

A teacher of Hangzhou Prefectural College once asked his students: 'Do you know how can *Qian* [Yang] correspond to metal, and *Kun* [Ying], too, corresponds to *metal*?' The students responded: 'Sir, you must be using a *Masha* edition [of poor quality printed in the commercial publishing centres

²⁶ *Ibid.*, p. 15.

²⁷ Susan Cherniack, 'Book Culture and Textual Transmission in Sung China', 54 *Harvard Journal of Asiatic Studies*, 5 (1994), p. 41.

²⁸ Simon Leys, *The Burning Forest: Essays on Chinese Culture and Politics*, London: Paladin Grafton Books, 1988, p. 181.

²⁹ *Ibid.*, p. 181.

³⁰ Song & Li, *China's Publishing History*, p. 233.

³¹ Chia, *Printing for Profit*, p. 121.

in Fujian], because the Directorate of Education edition tells that *Kun* corresponds to *receptacle*!' The teacher had to admit his mistake.³²

It is a common sense in Chinese thinking that Yang represents metal and Ying therefore represents *counter*-metal. It is therefore the *prima facie* similarity between the two Chinese characters, *i.e.*, *receptacle* and *metal* confused the teacher on this fundamental issue of Chinese philosophy.

After inevitable failure of occasional and partial measures of supervision, the Ming government once decided to practise a strict policy on the vexatious commercial printers, especially those in Fujian who provided cheap books. Prior to publishing, error-filled printing blocks were required to be proofread in accordance with the carefully collated version provided by the governmental institutions, which came from the endeavour of many scholars through the decades. A decree was issued in 1532 by the Office of the Provincial of Fujian, which read in part as follows:

The Five Classics and the Four Books are the most indispensable for students. The older editions were well printed; but now commercial printers, who aim at nothing but profits, issue pocket editions in small print and with many errors... [Many annoying examples given at this point...] This is harmful not only to beginners but to many candidates for degrees who have been disqualified because of the mistaken texts they have used, which is indeed a serious matter. This Office deems it necessary that all works published in this province, for circulation over the whole of the empire, be carefully collated to rectify the errors... Therefore this Office has petitioned the Judicial Commissioner to appoint competent instructors and students to collate all texts carefully. Characters, punctuation, and commentaries should all be made correct. Standard texts are accordingly to be printed and distributed to all printers in Jianyang to serve as a guide. All works must be checked before they are sold. Names of the block carvers are to be placed at the end of books to make possible the tracing of any mistakes committed... Any one who disregards this decree will be punished, and will have his blocks destroyed. No lenience will be shown.³³

³² *Ibid.*, p. 116.

³³ Kuang-Ch'ing Wu, 'Ming Printing and Printers', 7 *Harvard Journal of Asiatic Studies* 203 (1943), pp. 229-30. For its photocopy, see Chia, *Printing for Profit*, p. 35. This translation has been modified in accordance with its original Chinese version.

The Ming government even established a supervisory office in Fujian in 1536.³⁴ However, in practice the sanction was not as cruel as one may have imagined: the government normally sequestered the unqualified blocks and occasionally destroyed them.³⁵

Another crucial aspect of political control refers to military secrets and national defence. The Song government especially paid vigilant attention to it, as it was for all the time terribly threatened by several strong nomadic kingdoms in north China. An edict in 1040 expressed the worry that substantial amounts of books relating to governmental secrets were sold outside the Song Empire. The reputed official-literati Su Zhe (1039-1112) confirmed such situation when he completed his diplomatic mission to Liao, one of the nomadic kingdoms with vast territory in north China: 'I think that the north kingdoms have all the books our people printed in our empire. It is common to see the memorials of our officials, political discourses of our examinees which refer to our governmental policies, and military strategies.'³⁶ This even resulted in several petitions from Su Shi (1036-1101), another great poet and the brother of Su Zhe, urging the government to forbid exporting books to Korea in a fear that those books may flow into Liao and enhance the relationship between them.³⁷

The situation deteriorated during the South Song when the empire shrank to southeast China under the aggression of the north kingdoms. This finally resulted in a strict prohibition on printing those secrets. It was articulated by decrees that 'the frontier defence must be kept secretly...[so] the printing of any information relating to contemporary policies and national defence is prohibited hereafter'. This time the penalty was really heavy: 'those who carve and print the emperor's edicts, central government regulations and information relating to contemporary policies and national defence will be flogged eighty times; those who print information relating to the enemy's situation will be exiled for 3,000-li (approximately 400 miles)...[and] impeachment is allowed.'³⁸ It is noteworthy that 'flogging' and 'exile of 3,000-li' are mentioned by Alford to support his view that control was so inhumane that private rights were certainly snuffed out.³⁹ However, he does not mention the context of such control, in which strong policy was urgently necessary to protect the lifeline of a militarily flaccid state and its people, millions of whom were not very far from the moment of massacre by the Mongols.

³⁴ Chia, *Printing for Profit*, p. 177.

³⁵ *Ibid.*, p. 179.

³⁶ Song & Li, *China's Publishing History*, p. 96.

³⁷ Pow-key Sohn, 'Early Korean Printing', 79 *Journal of the American Oriental Society* 96 (1959), p. 97.

³⁸ Song & Li, *China's Publishing History*, p. 97.

³⁹ Alford, *To Steal a Book*, p. 14.

There must have been other reasons for publishing control which justify it. For instance, the repeated bans on the significant amount of pornographic books and pictures in the Qing were not aimed to suppress the people but to prevent further moral decline.⁴⁰ Measures were gentle as preaching and plea rather than punishment were more frequently applied. Consider one of the most significant bans of 1838: ‘now an office is established in the College of Wu County [of Suzhou] to purchase the pornographic pictures and books and their printing blocks you have collected. Each of them shall be sent to the Office to be destroyed. You will be *paid* according to their value and exempted from prosecution.’⁴¹

4.2. Investment and the emergence of copyright

Given the scale of publishing in general and publishing for monetary purposes in particular, we are able to analyze the impact of commercial reproduction of knowledge products associated with investment on the emergence of copyright protection.

A moral consequence of the massive scale of publishing is that bowdlerization and pseudepigraphy may proliferate under pecuniary motives. In medieval Europe, this resulted in occasional condemnation from authors;⁴² but such condemnation was not common -- before the fifteenth and sixteenth centuries, although the names of some medieval and classical authors were known, books were more usually referred to by their titles.⁴³ As Elizabeth Armstrong suggests, the concerns of potential damages to reputation by unauthorised versions of the authors’ works were slow to find expression in their applications for privileges in medieval France; an application by a preacher who may have contained such fear was however rejected by the Parlement in 1525.⁴⁴

The chief aspect accounting for this phenomenon is not that European culture contained no concept of respecting author’s reputation.⁴⁵ Rather, it is mainly because Europe

⁴⁰ Yu Zheng-xie, *kuisi cungao*, vol. 9. Cited from Li, ‘Kiangnan Publishing Industry’.

⁴¹ Yu Zhi, *Deyi lu*, vol. 11 (printed in 1863).

⁴² Cynthia J. Brown, *Poets, Patrons, and Printers: Crisis of Authority in Late Medieval France*, Ithaca: Cornell University Press, 1995, p. 252.

⁴³ John Feather, *A History of British Publishing*, London: Routledge, 1988, p. 4.

⁴⁴ Elizabeth Armstrong, *Before Copyright: The French Book-privilege System 1498-1526*, Cambridge: Cambridge University Press, 1990, p. 83.

⁴⁵ For early examples, see Pamela O. Long, *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance*, Baltimore: The Johns Hopkins University Press, 2001, pp. 34-35. In the Middle Ages, the writings of an *auctor* contained or possessed *auctoritas* in the abstract sense of the term, with its strong connotations of veracity and sagacity. Max W. Thomas, ‘Reading and Writing the

possessed a limited legacy of books when it emerged from the Dark Ages, making it more necessary to refer to book names instead of their authors; in contrast, China had always produced a huge number of original books,⁴⁶ in which, as Chapter Three has suggested, authorship became unavoidably important.

Condemnations of unauthorized textual changes are commonly found throughout Chinese history. The distinguished Tang poet Bai Ju-yi (772-846) declared at the very early stage of the application of printing technology in one of his new publications soon after his popular poems were printed everywhere: '[This collection] contains seventy-five volumes and 3,840 poems... Those poems unrecorded in this collection are definitely false!'⁴⁷ Si-ma Guang (1019-86), the noted historian of the Song dynasty expressed his worry in a postscript, which reads: 'I did not expect that Mr. Zhao printed it out and distributed the copies... [He] even changed its name... [T]his is not my intention! Mr. Zhao has changed its text significantly... [N]ow I have collated it to its original version.'⁴⁸ However, when printing spread to a wider extent, authors became angry rather than merely anxious. The great lyricist Su Shi was quite galled as he disclosed in a letter to a friend: '[M]y poems and essays are widely housed. However, they are mixed with supposititious ones. Sometimes they are altered by the vulgarian. I am indignant when reading them!' In another letter he wrote: 'I just condemned the money-oriented who published my works. I cannot wait to destroy his printing blocks. How can I have my poems published by them?'⁴⁹ Such indignation melted into an animosity in the mind of Zheng Ban-qiao (1693-1765), one of the eight noted Yangzhou artists in Qing dynasty. He wrote: 'My poems have all been published [in this collection]. If anyone dares to make pseudo copies in my name and add those tiresome writings into my book after my death, I will demoniacally haunt him and whack his skull!' ⁵⁰ As the following will indicate, in China copyright emerged from the author's claim to protect his reputation.

Renaissance Commonplace Book: A Question of Authorship?', 10 *Cardozo Arts & Entertainment Law Journal* 665 (1992), p. 676. Alistair J. Minnis, *Medieval Theory of Authorship: Scholastic Literary Attitudes in the Later Middle Ages*, 2d edn., Aldershot: Wildwood House, 1988, p. 10. Even the London Stationer's Company to some degree respected the author's reputation. See Lyman Ray Patterson, *Copyright in Historical Perspective*, Nashville: Vanderbilt University Press, 1968, p. 71.

⁴⁶ T. H. Tsien, 'Paper and Printing', *Science and Civilization in China*, ed. by J. Needham, vol. 5, Cambridge: Cambridge University Press, 1985, p.283. Shelton A. Gunaratne, 'Paper, Printing and the Printing Press: A Horizontally Integrative Macrohistory Analysis', 63 *Gazette* 459 (2001), p. 474.

⁴⁷ Bai Ju-yi, *Postscript of Bai Ju-yi's Collection*. Cited from Yuan Yi, 'Bai Ju-yi weisheme bijiao fan – chuban shi shang de zuji mingzhu xianxiang (Why Bai Ju-yi was Bothered – The Phenomenon of Nicking Masterpieces in Publishing History)', 3 *Zhuzuoquan (Author's Rights)* (2000), p. 8. It has been doubted by others that whether printing technology had been effectively employed for publishing at Bai's time. See, e.g., Fang, *The History of China's Publishing*, p. 77.

⁴⁸ Si-ma Guang, *Si-ma wenzhenggong chuanjia ji*, vol. 71. Cited from Song & Li, *China's Publishing History*, p. 236.

⁴⁹ Su Shi, *Yu Cheng Chuan-dao shu*. Cited from Yuan, 'Why Bai Ju-yi was Bothered', p. 8.

⁵⁰ *Ibid.*, p. 8.

With respect to the economic interests associated with commercial publishing, it is crucial to examine pre-modern China's competitive book market, which must have been stimulated by the above-mentioned huge demand of commercial publishing. Rivals were *de facto* fierce. As Hu Ying-lin (1551-1602), a noted literati of the Ming, commented, '[R]ecently the book qualities of Huzhou and Xixian have promptly mounted up, which constitutes a keen competition in price with other publishing centres such as Suzhou and Changzhou.'⁵¹

In order to attract captious customers in a competitive market, new works and new editions of old texts were commonly highlighted in their colophons with titles such as 'new edition', 'new definitively collated edition', 'expanded edition', 'revised edition', or 'expanded revised edition'.⁵² Advertisements popularly employed a tone claiming that 'customers are advised to recognise the *total* difference'.⁵³ Therefore, to purchase original works or stimulate writers to produce novel ones, investment must have played a crucial role because a publisher would be unable to find writers in a competitive market unless he agrees to pay them impartially or, to the reputed, considerably. A Ming version of an earlier novel *Fengshen yanyi* (Investiture of the Gods) was printed on its colophon that 'I [the publisher Shu Zai-yang] paid *heavily* to buy the manuscript of this book because it is collated by Mr.... and has not been seen before.'⁵⁴

Mature cooperation between writers and publishers developed. Famous painters were invited to illustrate books,⁵⁵ which would have unavoidably been a great selling point. This of course happened to reputed writers. Consider the preface written by the noted Ming novelist Feng Meng-long (1574-1646) for his widely distributed *Gujin xiaoshuo* (Stories Old and New): 'I accepted the invitation of the publisher and selected my forty novels that are likely to please the audience'.⁵⁶ Feng's novel immediately catalysed publishers to invite Ling Meng-chu (1580-1644), another renowned novelist, to create a masterpiece, *Chuke pai'an jingqi* (The First Slap on the Desk). As Ling revealed in the preface, 'Feng's novels are sold extremely well and the publishers think I must also have some secret ones that can match them; so I present you something *new* and may make

⁵¹ Ye Wan-zhong, 'Suzhou lishi shang de keshu he changshu (Publishing and Book Collecting in Suzhou's History)', in *Guji luncong (Studies on Ancient Books)*, ed. by Xie Guo-zhen and Zhang Shun-hui, Fuzhou: Fuzhou renmin, 1982, p. 406.

⁵² Cherniack, 'Book Culture', p. 80.

⁵³ Cited from Zhang chuan-feng, 'Mingdai keshu guanggao shulue (Brief Introduction on the Publishing Advertisement of the Ming)', 1 *Huzhou Normal College Journal* (2000), p. 76.

⁵⁴ Cited from Zhang, 'Brief Introduction on the Publishing Advertisement of the Ming', p. 79.

⁵⁵ Some specimens came out of famous painters such as Chen Hong-shou and Chou Yin. Wu, 'Ming Printing and Printers', p. 209.

⁵⁶ Cited from Li Yong-mei, 'Mingdai siren keshuye jingying sixiang chengshu de wuge biaoqian (Five Examples of the Mature Business Strategies of the Commercial Printers in the Ming Dynasty)', 4 *Sichuan tushuguan xuebao (Transaction of Sichuan Library)* (1996), pp. 77-78.

you laugh'.⁵⁷ Sometimes a long-term cooperation seems to be necessary. Contract may have been applied,⁵⁸ especially in the cases that some writers may have worked regularly with a *particular* publisher.⁵⁹ Most of the fascinating books published by a reputed and scholarly publisher Wang Ang (1615-1695) were cooperative fruits of Wang and his erudite friends.⁶⁰ Such cooperation was commonly found to be successful: the various books printed by the famous Fujian publishers and their writers, editors and commentators were widely sold everywhere.⁶¹ To achieve such a mature cooperation, it is hard to believe that investment played only an insignificant role.

There are two other relevant noteworthy phenomena. First, the above cooperation rather suggests that Chinese authors and publishers worked closely and therefore must have had their interests tied together. Although there must have been many authors who were treated unfairly,⁶² in many cases they may have put themselves in a more advantageous position as compared with the publishers if we take into account the phenomenon that many professional writers established their reputation in and beyond their home region.⁶³ The writings of an author like Ai Nanying (1583-1646) were so much in demand that Suzhou and Hangzhou booksellers paid him to come and write something -- anything -- they could publish.⁶⁴ In particular, the extent to which authors' additional payment was linked to commercial *reprinting* became more significant. As an advertisement of the early seventeenth century revealed, the reward for writers was linked to *greater* sales.⁶⁵ The second and most distinct phenomenon is that many authors operated as publishers or, *vice versa*, most famous publishers were themselves active as authors and even erudite teachers or pre-eminent scholars of the important works printed by them.⁶⁶ This happened

⁵⁷ Ling Meng-chu, *Chuke pai'an jingqi*, Taipei: Shijie Shuju, 1986, p. 1. Cited from Peng-Sheng Chion, 'Mingdai Suzhou Yingli chuban shiye jiqi shehui xiaoying (The Enterprises of Commercial Printing in Soochow in the Ming)', 5 *Jiuzhou Xuekan (Jiuzhou Academic Journal)* 139 (1992), p. 144.

⁵⁸ Kai-wing Chow, 'Writing for Success: Printing, Examinations, and Intellectual Change in Late Ming China,' 17 *Late Imperial China* 120 (1996), p. 130.

⁵⁹ Chia, *Printing for Profit*, p. 188.

⁶⁰ Ellen Widmer, 'The Huanduzhai of Hangzhou and Suzhou: A Study in Seventeenth-Century Publishing', 56 *Harvard Journal of Asiatic Studies* 77 (1996), pp. 77-122. Yang Mei, 'Wang An yu huandu zhai -- Mingmo Qingchu de chuban yanjiu (Wang Ang and Huanduzhai -- Publishing during the late Ming and the early Qing)', 6 *Chuban faxing yanjiu (Studies on Publishing)* 78 (2000), p. 78.

⁶¹ Fang, *The History of China's Publishing*, pp. 215-16.

⁶² As for Europe, we do know that stationers often paid authors in kind for their manuscripts, by providing them with a number of copies of the finished printed book. Joseph Loewenstein, *The Author's Due: Printing and the Prehistory of Copyright*, Chicago: The University of Chicago Press, 2002, p. 95. Publishers may have spent costs including paying the author a fee, giving his secretary a present, or promising some free copies of the book, in return for buying or *borrowing* a manuscript of his work. Armstrong, *Before Copyright*, p. 84.

⁶³ Chow, 'Writing for Success', p. 130.

⁶⁴ Timothy Brook, *The Confusions of Pleasure: Commerce and Culture in Ming China*, Berkeley: University of California Press, 1998, p. 170.

⁶⁵ Chow, 'Writing for Success', p. 130.

⁶⁶ Evidence is ample, for instance, from the data collected by Chia. See Chia, *Printing for Profit*, p. 10; p. 90; p. 93; p. 96; etc. For the phenomenon that authors acted as publishers in Europe, see Loewenstein, *The Author's due*, p. 108. It is difficult to exclude publishers outside the scope of copyright protection as they put investment into publishing. In Europe, copyright started from the protection of the investments of the

largely due to the fact that those who failed in imperial examinations always turned to other culture-related careers such as official assistances, teachers, writers and, if investments were ready, publishers.

Because investment is so crucial in the competitive book market, it is unlikely that publishers and authors were reluctant to secure their economic interests. It is quite enchanting that Yu Xiang-dou (1560-1637), a successful Ming publisher, and himself an author, vociferously berated the pirates in one of his self-composed novels, *Journey of Eight Gods to the East* (*Baxian chuchu dongyou ji*) as follows:

The novels I have published all came from careful compositions of my heart. I was so industrious that calluses appear on my hand; I invested so heavily that it is difficult to calculate! Those profiteering pirates...are impudent enough to be called scoundrels and knaves! How can those people do nothing but only lap something that I cast off?!⁶⁷

As the following analysis will indicate, economic interests were recognized as being legitimated by copyright protection in Chinese history.

4.3. Some existing cases of copyright protection

The earliest sample of copyright protection I have found is related to author's reputation. In the early twelfth century, probably several decades after Su Shi's complaint about the unauthorised printing of his poems, Fan Jun (1102-51), a reputed literati of the South Song, brought a publisher who falsely attributed a book to him to justice with a consequence that the publisher's printing blocks were destroyed and their selling stopped.⁶⁸

In 1177, several years after Fan Jun's legal action, the great Confucian scholar Zhu Xi, who at one time ran a publishing house for making profit,⁶⁹ and felt defensive when a

publishers. See John Feather, *Publishing, Piracy and Politics: An Historical Study of Copyright in Britain*, London: Mansell, 1994, p. 10.

⁶⁷ Zhu Chuan-yu, 'Mingdai chubanjia Yu Xiang-dou chuanqi (The Story of the Ming Publisher Yu Xiang-dou)', 16 *Zhongwai wenxue* (*Chinese and Foreign Literature*) (1987), p. 164. Chion, 'The Enterprises of Commercial Printing in Soochow', p. 152.

⁶⁸ Fan Jun, 'Da Yao Lin-sheng shu (Letter to Yao Lin-sheng)', *Fan Xiang-xi wenji* (*Collection of Fan Jun*), vol. 16. Quoted from Zhang, *China's Printing History*, p. 200.

⁶⁹ For details of Zhu Xi's publishing house, see Fang Yan-shou, 'Zhu Xi keshu shiji kao (Zhu Xi's Role as a Printer)', 1 *Fujian xuekan* (*Fukien Academic Journal*) (1995), p. 79.

friend remarked that selling books was unworthy of a scholar's notice,⁷⁰ petitioned the local government to seize the unauthorised printing blocks of his new work, *Explanation of the Four Books* (*Sishu huowen*),⁷¹ possibly because he felt it was not worth again to politely buy up the entire stock of copies of his book as he did previously from an unauthorised academy-official publisher in Wuzhou.⁷² He also warned a Zhejiang publisher, via another reputed Confucian scholar Lü Zu-qian (1137-81), to stop unauthorised reproduction of his new book, *On the Essential Meanings of Mencius* (*Lun Meng Jingyi*); otherwise, Zhu said, he would definitely bring the publisher to justice.⁷³

The earliest evidence of copyright claim printed in a book's colophon can be found in *The Anecdote of East Capital Luoyang* (*Dongdu shilue*), which was written by a noted scholar Wang Cheng during the Shao-xi period of the South Song (1190-94):

[T]his book has been printed by the family of Secretary Cheng of Meishan[in Sichuan]. We have reported (*sheng*) to the government and no one is permitted to reprint it.⁷⁴

This is the *only* historical evidence that Alford fully cited in his book.⁷⁵ It *per se* may release scant information with regard to private right, especially when we employ Alford's translation of *sheng* as 'register',⁷⁶ which probably results from his propensity to link registration with control and censorship. However, if we jointly consider the above discussion in general, and the remarkable role of Meishan as one of the most flourishing publishing centers of the Song⁷⁷ in particular, we would be able to believe that it is private right rather than control that the decree tried to reveal.

The situation will be better understood if we consider other more explicit evidence. A decree appeared on another book in 1238, several decades after the above one:

⁷⁰ Wing-Tsit Chan, *Chu Shi: New Studies*, Honolulu: University of Hawaii Press, 1989, pp. 77-81. Chia, *Printing for Profit*, p. 10.

⁷¹ Wang Mao-hong, *Zhuji nianpu* (*Chronicle of Zhu Xi*). Quoted from Fang, 'Zhu Xi's Role as a Printer', p. 78.

⁷² Cherniack, 'Book Culture', p. 65.

⁷³ Zhu Xi, 'Da Lu Bo-gong di ershiba shu (The 28th Letter to Lu Bo-gong)', *Zhuwengong wenji* (*Collection of Zhu Xi*), vol. 33.

⁷⁴ For the Photocopy of the original colophon, see Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, p. 2.

⁷⁵ Alford, *To Steal a Book*, p. 14.

⁷⁶ *Ibid.*, p. 14.

⁷⁷ Wei Yin-ru, *Zhongguo guji yinshua shi* (*The Printing History of China's Ancient Books*), Beijing: Yinshua gongye, 1988, p. 74. For the literary prosperity of Sichuan, see Zhang, *China's Printing History*, p. 86.

According to the petition of Wu Ji, the servant of Zhu's family: our family has carved and printed two books named *Fangyu shenglan* and *Siliu baoyuan* [two geographical works]. They are works of our paterfamilias [his honor Zhu Mu], which resulted from his independent composition and endeavour through the past years. We have invested heavily in carving and printing them. We are worrying that the profiteering printers will pirate these two books or change their names...[This] will seriously damage our mental efforts and investment, which are really crucial to us...This Office hereby declares that if any one dares to do so, he will be prosecuted and his printing blocks will be destroyed, under the petition of the victims.⁷⁸

Apparently the decree acknowledged the importance of the publishing-related economic investment and author's reputation, which resulted from his original and creative works. It also set forth concrete and reasonable methods to punish the pirates. This record was printed in the preface of one of the *magnum opus* of Zhu Mu (? - c. 1246), himself a great scholar and a noted student of Zhu Xi.⁷⁹ It seems that his action exceeded his teacher, who several years earlier was keen to do so.

It is noteworthy that in 1266, twenty-eight years after the issue of the above decree and twenty years after the death of Zhu Mu, his son Zhu Zhu obtained another decree to protect works of himself and his father:

According to the petition of Wu Ji, the servant of Zhu's family: the works of our late paterfamilias [Zhu Mu], i.e., *Shiwen leiju*, *Fangyu shenglan* and *Siliu miaoyu*, and the *Addendum of the Four Books of Zhu Xi* (*Zhuzi Sishu fulu*) composed by his honor [Zhu Zhu]...are results of whole-life endeavour and labour, and have no homology with those plagiarized work...Some profiteering printers, who are lazy to compose their own works according to their own mind and opinions, only pirate others, change the names of books, or bowdlerize the texts. This seriously affects scholarly learning...This Office hereby declares that... if any one dares to do so, he will be prosecuted and his printing blocks will be destroyed, under the petition of the victims.⁸⁰

Another decree appeared elsewhere in 1248:

⁷⁸ For its original text, see Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, p. 3.

⁷⁹ For Zhu Mu's relationship with Zhu Xi, see for example Chia, *Printing for Profit*, p. 358, footnote 96.

⁸⁰ For its original text, see Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, p. 3.

According to the petition of the local magistrate, Duan Wei-qing, to the Directorate of National Youth (*Guozi jian*): my late uncle Duan Chao-feng (Duan Cong-gui)...[is] a noted and beloved scholar...[whose] work *Cong-gui Commentary on Mao Poetry* (*Conggui maoshi jijie*) refers to ...many scholars' studies. Every single word inspires our soul. Only Mr. Luo [the student of Duan Cong-gui] has obtained a refined edition and has collated it prudentially...I hereby have it printed in order to circulate it. I am bearing in mind that my late uncle was so studious in his commentary and he spent his lifetime in composing this book. If any profiteering printers pirate it, the book will in most of the case be bowdlerized. This not only is ungrateful to Mr. Luo's intention, but also seriously desecrates the academic reputation of my late uncle... This Office hereby declares that... if any one dares to do so, he will be prosecuted and his printing blocks will be destroyed, under the petition of the victims.⁸¹

One thing to note is that Alford is aware of the above three historical records but he does not map the details for his readers. In his book, he briefly mentions them after mentioning the Meishan case:

There is some evidence of printers of the innocuous seeking the assistance of local officials to combat unauthorized use of their works and even of signs being posted to that effect...⁸²

Alford may have thought that these three decrees are not important because he denies the pervasiveness of them. As he writes: '[Seeking the assistance of local officials...] may well have been attributable to the fact that, as with Secretary Cheng, private printers and local officials were often one and the same.'⁸³

This opinion in effect originates from Ye De-hui (1864-1927), a bibliophile of late Qing, in his famous book *Shulin qinghua*.⁸⁴ Ye seemed to have more reasons to distrust the pervasiveness of the three cases than Alford does. Ye used significant length to enumerate that government-published books had never been limited for free copying and

⁸¹ *Ibid.*, p. 4.

⁸² Alford, *To Steal a Book*, p. 14.

⁸³ *Ibid.*, p. 14.

⁸⁴ For its original text, see Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, p. 8. One thing to note is that the original expression of Ye suggests that 'the authors and publishers [in the three cases] may have good relationship with the government', rather than they were 'one and the same'.

reprinting.⁸⁵ however, he seemed to have been unaware that Confucian Classics, ancient histories and medical prescriptions released by the government, which filled in the main lists of official printing, always remained in the public domain for the purpose of promoting knowledge, education and public health;⁸⁶ he thus failed to detect that the decrees he collected were issued to the contemporary authors rather than to the ancestors of human intellectual history.

Alford not only distrusts the pervasiveness of the decrees, in the footnote of the above expression, he seems to have little trust in the credibility of Ye's book itself: 'Even the late Qing study *Shulin qinghua*, which deals more extensively with Song prohibitions on printing than any other, consists of little more than isolated *anecdotes*.'⁸⁷ However, possibly the anecdotal nature of Ye's book aside, the three cases are trustworthy as they appeared in Ye's personal collections with those decrees printed on their colophon or in their prefaces.

If we are not merely beset by the lack of more evidence, which is largely attributable to the unfinished archaeological tasks of historians, but detour to understand the certain function of precedents in imperial China's judicial system,⁸⁸ and the very nature that decree played in enforcing civil rights,⁸⁹ we would incline to heed another piece of information provided by Ye, who articulated subsequently, although contradictorily: 'However, such decrees were fashioned. The publishing since the Yuan followed such patterns and precedents.'⁹⁰ Ye's testimony is a decree appeared in a phonologic work in 1297 during the Yuan period (1271-1368)⁹¹, which reads:

I (Chen Shi) have been commissioned by my late teacher, the former secretary, Mr. Huang Zai-xuan (i.e. Huang Gong-shao), to publish his *Gujin yunhui juyao* in thirty volumes. This work, including the form and pronunciation of archaic and modern characters, enables one to see clearly

⁸⁵ For Ye's detailed analysis, see Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, pp. 6-8.

⁸⁶ For the social function of publishing, see Chapter Five.

⁸⁷ Alford, *To Steal a Book*, p. 136, footnotes 38.

⁸⁸ The function of precedents in the Song as analysed by Brian E. McKnight is worth to refer to. See Brian E. McKnight, *Law and the State in Traditional East Asia: Six Sources of East Asian Law*, ed. by Brian E. McKnight, Honolulu: University of Hawaii Press, 1987.

⁸⁹ Decrees were commonly applied in imperial China. They were largely represented as epigraph in Ming and Qing dynasty by the winner of a civil case. For one of the most authoritative collection of such epigraph, see *Ming Qing Suzhou gongshangye beike ji (Collection of Suzhou's Industrial and Commercial Epigraph in the Ming and Qing Dynasty)*, ed. by Suzhou History Museum, History Department of Jiangsu Normal College and Institute of Ming and Qing History of Nanjing University, Nanjing: Jiangsu renmin, 1981.

⁹⁰ Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, p. 8.

⁹¹ The year of the publication is cited from Kuang-Ch'ing Wu. See Kuang-Ch'ing Wu, 'Chinese Printing under Four Alien Dynasties 916-1368A.D.', 13 *Harvard Journal of Asiatic Studies* 447 (1950), p. 499.

the metamorphosis of the Chinese language. It is indeed the most remarkable compilation that has never been seen before. Now I am putting it in print. Carefully and repeatedly collated, it has no mistakes; and I want to share it with scholars all over the country. However, this is an independently composed work; it is different from those conventional compilations put out by bookstores. I am afraid that unscrupulous people with an eye to profiteering will alter its title, reproduce it in a condensed form and thus do untold harm to scholars. I have therefore petitioned the authorities to prohibit such an act. Customers are hereby reminded of this fact.⁹²

There are many evidences indicating the survival of the Song pattern of copyright protection during the Ming dynasty, a period that commercial printing was at ease in the absence of institutional publishing control and a rigorous censorship system that required the registration with the government and submission of books for review, as the eighteenth-century English and French censorship had done.⁹³ The above-mentioned thriving tableau of the Ming commercial publishing impresses us not only by the mature business tactics of authors and publishers, but also by their positive roles in pursuing their copyrights.⁹⁴

Consider a story written by the most celebrated Ming literati Feng Meng-long (1574-1646) in his noted book *Brainpower* (*Zhinang*), which seems to be a compilation of various tricks deemed to be practical, although occasionally underhand:

A publisher, in order to promote his sales, deceived the local government that his new books have been pirated. The governmental action in searching the pirates not only stopped the potential piracy but also made that book famous everywhere before it came into the market.⁹⁵

That Feng considered such an action workable is largely attributable to a phenomenon that copyright was a *legitimated* thing in the Ming. This provides an apprehensible context for our understanding of the ‘courage’ expressed in an announcement appearing

⁹² For Ye’s records, see Zhou & Li, *Historical Materials for the Studies of China’s Copyright History*, p. 8. In English, see Wu, ‘Chinese Printing’, pp. 499-500. I have partly revised the translation.

⁹³ Chow, ‘Writing for Success’, p. 338.

⁹⁴ Allee’s research suggests that the Chinese in the late Qing were far from timid about initiating legal actions. Mark A. Allee, *Law and Local Society in Late Imperial China: Northern Taiwan in the Nineteenth Century*, California: Stanford University Press, 1994, pp. 3-4; p. 252. In Yüan, a person who won a case was often congratulated by his friends. See Paul Heng-chao Ch’en, *Chinese Legal Tradition under the Mongols*, Princeton NJ.: Princeton University Press, 1979, p. 92.

⁹⁵ Feng Meng-long, *Zhinang quanji* (*Collections of Brainpower*), vol. 28. Quoted from Chion, ‘The Enterprises of Commercial Printing in Soochow’, p. 152.

in another book, *Daoyuan yiqi*, published during Chong-zhen period (1628-1644) of the late Ming, which reads:

If any profiteering and unscrupulous person dares to pirate this book, I will unhesitatingly bring him to justice so as to protect my interests.⁹⁶

Such announcement or colophon (*Paiji*), which emerged since the Song and flourished during the Yuan and Ming, normally appeared in a prominent place of a book with decorative frames around it.⁹⁷ A book named *Ji-lei ji* written by a Song author, Chao Bu-Zhi (1053-1110), was published by Gu Ning-yuan during the Ming with a more detailed note on the upper corner of the cover, which provides the reason why piracy is not permitted:

There has never been any printed edition of this work [in the Ming dynasty]; and in manuscript copies there are many errors. We have carefully collated the work from a Song edition and have printed it herewith for the public. Those who reprint it for profit will be prosecuted by law regardless of their distance from this place.⁹⁸

A similar *paiji* of the early seventeenth century reads:

This book, *Contemporary Successful Essays for Imperial Examinations* (*Huangming wenjuan*), is published by Chen Press with carefully collected essays from the early period to our recent dynasty [the Ming], spanning also the Han, Tang and Song dynasties. It is absolutely helpful to examinees. Pirates will definitely be prosecuted.⁹⁹

A *paiji* indicates the phenomenon that honest Chinese authors and publishers well understood the importance of respecting others' work. A colophon appeared in *Pianzhi bieji*, a book published in Tianqi period (1621-1627) by Da-lai Tang Press based in Suzhou, one of the most noted printing centres of late imperial China:

⁹⁶ Fan Kai-hong, 'Shilun Zhongguo gudai de banquan baohu (On Copyright Protection in Ancient China)', 3 *Jintu xuekan* (*Academic Journal of Shanxi Library*) (1999), p. 55.

⁹⁷ Ye De-hui, *Shulin qinhua*. Quoted from Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, p. 9.

⁹⁸ Wu, 'Ming Printing and Printers', p. 231.

⁹⁹ Zhou & Li, *Historical Materials for the Studies of China's Copyright History*, p. 13.

We gentlemen, either capable to compose or to invest in publishing, engage only in elegant, creative activities and, firmly reject plagiarism and piracy. If any profiteering villain dares to counterfeit and mislead the customers, he will be severely prosecuted. No mercy will be shown.¹⁰⁰

These *paiji*, which explicitly state with a similar tone that ‘pirates will by all means be prosecuted no matter where they are’, are by no means isolated; rather, they are widely used in the Ming publishing arena.¹⁰¹

Justification for copyright existed in the Qing. Li Yu (1611- c.1680), a noted dramatist and a successful publisher whose works were widely welcomed, revealed his contentment in a letter when he talked about his newly composed and printed works:

Some pirates coveted to copy my new works of *Jiezi Yuan* that I recently published. Fortunately, I heard the rumour at its very early stage. I therefore petitioned the local authority to post a decree. So their plot was stopped timely.¹⁰²

In another case, Li sent his son-in-law, Shen Yin-bo, to Hangzhou to prosecute the reprinters when he heard that pirated works were going to be put on the market.¹⁰³ For another author and publisher, Li Ru-zhen, however, the story behind his *paiji*, ‘carved in 1821 and reprint will be definitely prosecuted’, which was printed on his famous novel *Jinghua yuan* published in Suzhou, was more bitter: pirates located in a small town of Nanjing reprinted his work, making his books unmarketable in half a month; Li resentfully prosecuted them.¹⁰⁴ As a matter of fact, it was not until the enactment of China’s first copyright law of 1910 that the use of petitions and decrees quit the historical stage.¹⁰⁵

4.4. The family-based model of craft secrecy

¹⁰⁰ *Ibid.*, p. 13.

¹⁰¹ For more historical records, see Zhou & Li, *Historical Materials for the Studies of China’s Copyright History*, p. 13; Cao, ‘Exploration on Ancient China’s Author’s Rights’, p. 37.

¹⁰² For details, see Yuan Yi, ‘Zuowei chubanshang de Li Yu (Li Yu as a Commercial Publisher)’, *Guangming ribao (Guangming Daily)*, 16th November 2000.

¹⁰³ *Ibid.*

¹⁰⁴ Yuan, ‘Why Bai Ju-yi was Bothered’, p.8. Song & Li, *China’s Publishing History*, p. 236.

¹⁰⁵ For two decrees of the close of the nineteenth century, see Zhou & Li, *Historical Materials for the Studies of China’s Copyright History*, pp. 48-49.

Exclusive right in inventions may have existed since the early stage of human history when economic interests associated with inventions became visible. Taking an example of ancient Greece, in the city of Sybaris where culinary competitions were proverbial for luxury, a successful cook who invented a new dish was given an exclusive right to prepare it for one year.¹⁰⁶ However, it seems that no ample evidence of such right existed with regard to many aspects of daily life, which may be attributable to the fact that economically such a model was not of significant importance.¹⁰⁷

From the thirteenth century onwards, the exclusive right in the form of craft secrecy developed remarkably in Europe, initially in Venice, the leading centre of European handicraft technologies. For instance, the advanced industry of glass making resulted in the Venetian senate's order of prohibiting the export of the information and practice concerning that process. The family-based model of craft secrecy developed because glass-making families relied on them in competition. Due to several reasons explored below, patent practice gradually took over. Since the fifteenth century, a steady flow of patent awards from Venice and elsewhere represented by time-limited monopolies for the introduction of new technologies or novel craft processes began to grow.¹⁰⁸

Chinese crafts developed from the Neolithic age. Different tribes across the vast territory often specialized in one or several crafts based upon their local resources and skills. Geographical differences fostered a well-developed market of exchanging handicrafts. Therefore, handicraft skills and particularly new inventions became valuable. To secure competitive advantages, these techniques 'were inherited in their tribes and families [with a form that] sons succeeded their fathers' techniques'.¹⁰⁹ This explains a phenomenon that some Chinese family names adopt the names of crafts their ancient ancestors specialized in.¹¹⁰ In about the twenty-sixth century BC when the state began to take its shape, Huang-di (the Yellow Emperor) appointed several handicraft officials who might

¹⁰⁶ M. Frumkin, 'The Origin of Patents', XXVII *JPOS* (1945), p. 143.

¹⁰⁷ Long, *Openness, Secrecy, Authorship*, p. 71.

¹⁰⁸ Long, *Openness, Secrecy, Authorship*, pp. 90-5.

¹⁰⁹ Ma Yong-qing, *Lai zhen zi*. Cited from Quan Hansheng, *Zhongguo hanghui zhidu shi (History of Chinese Guild System)*, reprinted from Shanghai edition of 1935, Taipei: Shihuo 1978, p. 8 Historical Records can also be seen from various Confucian literature such as *Zhouli*, *Guoyu* and *Xunzi*. For a brief discussion, see Zhang Zexian, *Tangdai gongshang ye (Industry and Commerce in Tang Dynasty)*, Beijing: Zhongguo shehui kexue, 1995, p. 3.

¹¹⁰ For instance, Tao is a family name generated from pottery (tao). See Zhen Qiao, *Tongzhi shizu lue*. Cited from Quan, *History of Chinese Guild System*, p. 8. Also see Tong Shu-ye, *Zhongguo shougongye shangye fazhan shi (The History of the Development of China's Handicrafts Industry and Commerce)*, Jinan: Qilu shushe, 1981, p. 9. Chen Huan-Chang, *The Economic Principles of Confucius and His School*, 2edn., Bristol: Thoemmes Press, 2002, p. 409.

come from different tribes specializing in different types of handicrafts.¹¹¹ This model was inherited when the form of state developed.¹¹²

When the economy expanded, families gradually replaced tribes to transmit their techniques from generation to generation, which became a widely adopted societal custom to the effect that even today advertisements purporting family inherited techniques are commonly known to most Chinese people.¹¹³ For instance, the Han family in Guizhou was famous in making bamboo flutes for generations and their techniques were secretly kept within their family.¹¹⁴ Guilds or social groups with industrial ties had the same practice. Even a Fuzhou temple of the Song dynasty kept secret its newly invented technique of weaving a form of special, valuable gauze for summer clothes. The people outside the temple weaved a great deal but customers were able to tell the difference between the two kinds, and gauzes made outside the temple were sold for twenty to thirty per cent less than those made inside.¹¹⁵

This societal custom could be strict because inventors were in many cases unwilling to disclose their techniques to others with a fear that he would be unable to gain profit from it. A Guangzhou family which invented a complicated technique of making flannelette kept its invention so secretly that only very limited workers were recruited.¹¹⁶ The residents of a small village in Hebei who developed a good market by making special measuring instruments agreed in their clan regulation that the invention was not inheritable to females because of a fear that their marriages to other villagers would possibly transmit the skill to outsiders and potential competitors.¹¹⁷ As pointed out in Chapter Three, Chinese innovations in general emerged in accordance with market

¹¹¹ Liu Guoliang, *Zhongguo gongye shi (History of China's Industry)*, Nanjing: Jiangsu kexue jishu, 1990, pp. 44-45.

¹¹² For instance, Xi Zhong, the founder of the Xue Dukedom, was the Chief of Vehicle Department of the Xia Dynasty. See *Dingdong yuannian, Zuozhuan*. Cited from Tong, *The History of the Development of China's Handicrafts Industry and Commerce*, p. 9.

¹¹³ These records can be commonly found in historical literatures. *Taiping guangji*, a great book composed in the late tenth century, had many records. See Li Zhi-sheng, 'Tangdai gongshang yezhe hunyin zhuangkuang chutan (Marriage of the Merchants and Craftsmen of the Tang Dynasty)', 3 *Renwen zazhi (Journal of Humanities)* (1997), p. 66.

¹¹⁴ 'Hucheng beikao (Vol. 6)', in *Shanghai zhanggu congshu*. Cited from Peng Yu-xin, 'Ming Qing shiqi de puhu zuofang he ziben zhuyi mengya (Workshops of the Ming and Qing Dynasties and the Embryonic Capitalism)', *Zhongguo ziben zhuyi mengya wenti lunwen ji (Collections of the Studies of China's Embryonic Capitalism)*, Institute of the Ming-Qing History Studies of Nanjing University (ed.), Nanjing: Jiangsu renmin, 1983, p. 207.

¹¹⁵ Zhu Yu, *Pingzhou ketan*, Vol. 2. Cited from Shiba Yoshinobu, *Commerce and Society in Sung China*, (trans. By Mark Elvin), Ann Arbor: University of Michigan, Center for Chinese Studies, 1970, p. 113.

¹¹⁶ Fan Duan-ang, *Yuezhong jianwen*, Vol. 23. Cited from Peng, 'Workshops of the Ming and Qing Dynasties and the Embryonic Capitalism', p. 207.

¹¹⁷ Miu Quan-sun, *Guangxu Shuntian fuzhi*, Vol. 11. (Citing *Yongqing xianzhi* edited by Zhou Ron in 1780). Cited from Peng, 'Workshops of the Ming and Qing Dynasties and the Embryonic Capitalism', p. 207.

demand.¹¹⁸ Therefore, it is the market competition and the nature of ‘public goods’ that made inventions and handicraft skills valuable.

The model of family craft secrecy may be viewed as an unfair privilege from modern perspectives. But its existence is not entirely unreasonable in pre-industrial times, in which most inventions occurred under continuous handicraft improvement from generation to generation. For instance, a heat-resistant crucible requires very detailed knowledge and split-second timing acquired through experience: the crucial details of how long to hold things in the fire, at what angle, and how it should look at various points were so ingrained that these artisans would not even know what needed explaining to one from the outside.¹¹⁹ The reality thus makes a family transmission model more workable because family members, rather than the outsiders, have the best opportunities to live together day and night to comprehend the practical skills and achieve further innovations. The noted ancient politician Guan-zi (c. 725 BC-645 BC) clearly rationalized the ancient model of family transmission:

[Fathers] teach their sons from childhood so their sons can learn the skills with unfaltering and devotional mood. This makes it easier for the knowledge to be transmitted. So the sons of the artisans always become artisans.¹²⁰

Therefore, it is not extremely unreasonable that a family always shares the profits of its invention which will secure its business.¹²¹ Taking an example of one of the innovations of the Ming potters, *i.e.*, building larger kilns with greater capacity to produce small pieces more quickly, and fire larger pieces like ‘dragon jars’,¹²² the Wei family especially had unique skills inherited for generations since the Yuan and Ming dynasties, which made them able to form a separate trade network of kiln repairers.¹²³ Lack of exclusive

¹¹⁸ Yosida, ‘The Chinese Concept of Technology: A Historical Approach’, p. 66. Elvin also suggests that inventions appear when there is a need or demand for them. N. Sivin, ‘Imperial China: Has its Present Past a Future’, 38 *Harvard Journal of Asiatic Studies* (1978), p. 472.

¹¹⁹ Kenneth Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy*, Princeton NJ: Princeton University Press, 2000, p. 66.

¹²⁰ Quan, *History of Chinese Guild System*, p. 6.

¹²¹ Toshiko Takenaka gives examples of Japan. This is constructive because Japan transplanted imperial frameworks from China, although Japan remained in a feudal system. Toshiko Takenaka, ‘Does A Cultural Barrier to Intellectual Property Trade Exist? The Japanese Example’, 29 *N.Y.U. J. Int’l L. & Pol.* 153 (1996-97), p. 158.

¹²² Michael Dillon, *A History of the Porcelain Industry in Jingdezhen*, PhD dissertation, University of Leeds, 1976, pp. 101-12.

¹²³ Xiang Zhuo, ‘Jingde zhen taoye jishi (A History of the Pottery Industry of Jingde zhen)’, in *Nanjing geye gaikuang diaocha I (An Investigation of the General Situation of the Industries in Nanjing)*, c. 1935. Cited from Xu Dixin & Wu Chengming, *Chinese Capitalism, 1522-1840*, London: MacMillan Press Ltd, 2000, p. 326.

rights protection, inventors and their families may feel insecure when making continuous technological improvements and consequently selling their products in the competitive market.

Strict family craft secrecy model, which was mainly adopted by small business, may not have been the only form of exclusive rights. When guilds or industrial associations expanded, the transmission and publicity of techniques within the guilds may take a model of proto-patent licensing.¹²⁴ This approach probably started to emerge in antiquity. As recorded in *Zhuang-zi*:

There were people in the Song dukedom specializing in making materials of bleaching silk. [To protect their hands], a member of the tribe invented a medicine for skin chaps. Someone tried to buy the prescription with hundreds of money. The whole tribe gathered together and discussed: ‘our tribe has been doing this business for generations and the profit is not significant. That man wants to pay huge amount of money. Why shall we refuse to transfer the prescription to him?’¹²⁵

4.5. The enigma of the patent system

Pre-modern China’s practice of recognizing customary laws by government and judicial judgements makes it possible that the custom of family craft secrecy and its reasonableness and effects are likely to be thought as being legitimated. However, the explicit attitudes of laws and judgements towards exclusive rights on inventions are very difficult to be found. As compared with trademark and copyright, disputes about exclusive rights on inventions were rare probably because even in the most innovative land of China,¹²⁶ pre-industrial inventions were much less frequent than publishing and trade and, unlike a book or a trademark, many secret skills are actually much harder to be duplicated without authorization.

¹²⁴ For instance, most of the Jingdezhen pottery workers, glazing shop workers and kiln operators all hand down their skills within their own group (bang). Xiang, ‘A History of the Pottery Industry of Jingde zhen’. Cited from Xu & Wu, *Chinese Capitalism*, p. 326.

¹²⁵ *Xiaoyao you, Zhuangzi*. Cited from Zhao, Gang and Chen, Zhong-yi, *Zhongguo jingji zhidu shi (History of China’s Economic System)*, Beijing: Zhongguo jingjichubanshe, 1991, p. 285.

¹²⁶ China is praised by Joseph Needham for its unmatched contribution to the world’s inventions. For a brief history, see Colin A. Ronan, *The Shorter Science and Civilisation in China: An Abridgement of Joseph Needham’s Original Text*, Vol. 5, Cambridge: Cambridge University Press, 1995.

A European-styled patent system was not imperative for China. Some aspects of this issue with regard to technology dissemination will be discussed in detail in Chapter Five. What is important here is a general landscape of Chinese innovation: in addition to the family secret model for stimulating and promoting inventions, China applied a multiple mechanism that enabled government to stimulate and attract most of the important inventions relating to social benefits, and their effective dissemination across the giant territory. The situation in Europe is quite different: the small and separated kingdoms made it difficult to absorb technologies without some heavy costs.¹²⁷ The intention of establishing patent systems in many countries, such as England and Germany,¹²⁸ was not to stimulate innovation but to attract foreign technologies existing in other countries such as Venice.¹²⁹ The desire was extremely strong because industrial progress in most European nations such as England was less developed than several relatively advanced countries, which owed to the higher civilization of the East.¹³⁰

In fact, importation of technologies appears to have been the favoured mode if for no other reason than that existing trade knowledge suggested certain industries practiced abroad might be profitable if worked within the realm. New inventions might result in new industries, but this was more speculative.¹³¹ As a result, the majority of patent grants in England in the sixteenth and during much of the seventeenth century were for patents of importation. The definition of novelty even did not change until the second half of the eighteenth century in Britain.¹³² It is noteworthy that without an explicit patent law the introduction of foreign technologies would be impossible. For instance, the death penalty awaited Venetian glass-blowers who tried to practice their art abroad in the fifteenth century¹³³ because the main craft of Venice was glass-making and the Venetian government was very cautious in protecting it.¹³⁴

¹²⁷ In terms of separated territories, Japan demonstrated a similar example to create a patent-like monopoly due to its feudal political nature. For instance, the *Edo Bakafu* central government granted each local warlord government patents for making and selling local products unique to the region. Takenaka, 'Does A Cultural Barrier to Intellectual Property Trade Exist?', p. 157.

¹²⁸ The German Empire had a patent system in the sixteenth-seventeenth centuries but was destroyed so thoroughly that it was forgotten. Hansjoerg Pohlmann, 'The Inventor's Right in Early German Law', 43 *J. Pat. Off. Soc'y* 121 (1961), pp. 134-35. For a notable example of the English patent system which initially aimed at attracting technology transfer from European continent, see Frank D. Prager, 'Historical Background and Foundation of American Patent Law', 5 *Am. J. Legal Hist.* (1961), pp. 309-10.

¹²⁹ P. J. Federico, 'Origin and Early History of Patents', XI *JPOS* 292 (1929), p. 293.

¹³⁰ Harold G. Fox, *Monopolies and Patents: A Study of the History and Future of the Patent Monopoly*, Toronto: The University of Toronto Press, 1947, p. 190. William H. Price, *The English Patents of Monopoly*, Cambridge: Harvard University Press, 1913, p. 30; pp. 43-56.

¹³¹ Edward C. Walterscheid, 'Novelty in Historical Perspective (Part I)', 75 *JPTOS* 689 (1993), p. 691.

¹³² Edward C. Walterscheid, 'Novelty in Historical Perspective (Part II)', 76 *JPTOS* 777 (1993), p. 797. Patent of importation even continued to issue in Britain from early the 19th century. *Ibid.*, p. 797.

¹³³ Frumkin, 'The Origin of Patents', p. 144.

¹³⁴ For the industrial monopoly power of Venice in medieval Europe, see Frank D. Prager, 'A History of Intellectual Property from 1545 to 1787', XXVI *Journal of the Patent Office Society* (1944), pp. 712-13.

The less importance of patent law in technology dissemination can be further demonstrated by examining the technology flow from pre-modern China to Korea and Japan. The major periods of China-Korea and Japan relations have been very friendly. Chinese talent, including scholars, painters, carpenters, founders, went to Korea and Japan on a considerable scale, bringing with them China's latest technologies. This knowledge flow was actively promoted by the Chinese government, especially during the Tang dynasty. Policies were established in Korea and Japan to welcome Chinese immigrants who were offered land and allowed to settle down. They resided in various places and raised wealthy families. They often occupied important positions in the local and central governments.¹³⁵ It seems that for Japan and Korea it was not overwhelmingly important to introduce a patent law to encourage Chinese immigrants, who were rather encouraged to export their skills than threatened by death penalty for doing so.

There may be other reasons. A statistical review of the early European patents shows that the majority of the patents were granted to simple technologies,¹³⁶ which were far below the Chinese inventions if we follow Needham's comparison. In China it was not necessary to create a patent system for these technologies which were so crucial to society because they were mainly promoted by the government. The emergence of the patent system in Europe is initially designed to stimulate inventions in a circumstance that inventions were very scarce; but China had a longer history of producing much more inventions than Europe did. An explicit law to stimulate inventions, therefore, seems to be not absolutely necessary. It is noteworthy that the effect of a written patent law is not always remarkable in pre-industrial societies: the great majority of the patented inventions of fifteenth-sixteenth century Venice did not have commercial success; only a few were important enough to provoke infringements and official intervention.¹³⁷

Therefore, the family-based model of craft secrecy should be viewed as a result of the recognition of the nature of knowledge products, which inherently require preventing unauthorised duplications, and in turn, loss of investment. The less significance of patent-like practice in China cannot deny the fact that exclusive rights on inventions in the form of craft secrecy existed and were to some degree recognized as being legitimated in pre-modern China.

¹³⁵ Hiroshi Sato, 'Transplanting Technology: two Episodes in Japanese History', p. 87.

¹³⁶ Federico, 'Origin and Early History of Patents', pp. 296-97.

¹³⁷ Giulio Mandich, 'Venetian Patents (1450-1500)', *XXX Journal of the Patent Office Society* (1948), p. 193.

4.6. Conclusions

As the investigations provided in this chapter have illustrated, proto-intellectual property practices of copyright and the family-based model of craft secrecy existed and developed in pre-modern China and were well understood by the Chinese. It seems that these practices were not as sophisticated and mature as what we have today. For instance, copyright protection did not explicitly provide limited duration for the exclusive right; exclusive rights in technological innovations mainly took the primary shape of family-based craft secrecy while a patent-like system might be inexistent or isolated. However, if we put these practices into the context of the then productivity of the pre-modern society and compare China's practices with those of Europe, we can see that China's performance was not negligible or inferior.

More importantly, one crucial thing is clear that the Chinese practically recognized the importance of what we would now call 'intellectual property' and viewed it as being legitimized both culturally and legally. This finding sufficiently demonstrates that intellectual property represented by exclusive rights granted on knowledge products is an inevitable choice of the development of commodity economy and technological changes, in which the inherent nature of knowledge made the application of proto-intellectual property regimes a must.

CHAPTER FIVE

The Oriental Happiness: Using Knowledge to Promote the Public Interest

*The ancients said that ordinary people who carried gems may attract troubles [from others].
Books as treasures are more valuable than gems.
How can we keep them and buy in those troubles?*

– Li Ru-yi, a sixteenth-century Chinese author.¹

The last two chapters have provided systematic examinations of the existence of creative vitality and proto-intellectual property protection in pre-modern China. The Chinese understanding of creativity not only did not hinder the advent of intellectual property but actually justified it. Inherently required by the nature of intangible knowledge, intellectual property protection appeared and developed in tune with the increases of investment in producing and commercializing knowledge products.

However, if our examinations stop here, the only conclusion will be that intellectual property is an eternal idea,² a conclusion that will aggravate the deification of intellectual property. In this chapter, I intend to extend the historical probe to observe several crucial aspects related to the public interest in using knowledge. Putting intellectual property in the context of the public interest in using knowledge will provide a better understanding of the function of intellectual property: why knowledge and in particular creative knowledge protected by intellectual property are so much demanded by human society.

5.1. Anti-monopoly and social welfare

Western scholars often argue that modern intellectual property laws have direct linkage with the sixteenth-century English publishing guild known as the London Stationers' Company, which had exclusive rights in publishing and significantly hindered the public interest. This argument often leads us to viewing intellectual property as naturally evil and harmful to the public interest. But in pre-modern China, intellectual property was, as the following will argue, less associated with monopolistic behaviour.

¹ Li Ru-yi, *Jiangyun lou tiba*. Cited from Zhou Shao-chuan, *Changshu yu wenhua: gudai sijia changshu yanjiu* (Book-collecting and Culture: Studies of Private Book-collecting in Imperial China), Beijing: Beijing shifan daxue, 1999, p. 282.

² Frank D. Prager, 'The Early Growth and Influence of Intellectual Property', 34 *Journal of the Patent Office Society* 106 (1952), p. 106.

The idea of monopoly has been disfavoured since ancient times. King Li of Western Zhou dynasty (11th-century BC-771 BC) who attempted to monopolize the forests was eventually exiled by his subjects.³ The explicit view towards monopoly can be found in several ancient Confucian Classics. For instance, as recorded in *Chunqiu* (Spring and Autumn Annals), ‘Because [the great mountains and rivers] are the natural resources of Heaven and Earth, which are not produced by human power, they ought to be shared in common by all.’⁴ *Baihu tong* (Comprehensive Discussions in the White Tiger Hall) shares the same view: ‘It makes all the people share the advantages, and does not allow any single nation to monopolize them. The riches of mountains and forests, as well as the advantages of water and rivers, should be commonly distributed over thousands of miles.’⁵

The first fierce debate about monopoly attracting politicians and scholars is the salt and iron debate erupted in 81 BC. Confucian literates worried that state monopoly on iron and salt would cause many problems including unreasonable prices and less business opportunities for the common people. The emperor Wu’s intention of monopolizing salt and iron industry was to raise more money to defeat the massive invasion of the Huns. Eventually the state monopoly was carried out but the result was not as bad as Confucian literates feared. The qualities of goods were normally excellent while the prices were not higher than goods produced by private manufacturers.⁶

Guild monopoly existed in China. As early as in the Song dynasty when guilds started to emerge, apprenticeship, price controls and market division swiftly spread so as to prevent potential surges of new comers.⁷ These forms were not inherently evil because monopoly is often demanded by low-level productivity. However, the existence of a united giant market and the freedom of a high population shift across the whole Chinese empire made it difficult and unreasonable to maintain strong power of repulsion,⁸ a phenomenon contrary to mediaeval Europe where feudal systems favoured a limited and territorial

³ *Zhouyu shang, Guoyu*. Also see Chen Huan-Chang, *The Economic Principles of Confucius and His School*, reprinted from the 1911 edition, Bristol: Thoemmes Press, 2002, pp. 534-35.

⁴ *Huangong shiliu nian, Gongyang zhuan, Chunqiu*. Chen, *The Economic Principles of Confucius and His School*, p. 540.

⁵ Chen, *The Economic Principles of Confucius and His School*, p. 540.

⁶ Song Zhi-min, *Handai shougongye (Handicraft Industry of the Han Dynasty)*, Chengdu: Bashu shushe, 1992, pp. 26-30.

⁷ For an early research, see Quan Han-sheng, *Zhongguo hanghui zhidu shi (History of Chinese Guild System)*, Taipei: Shihuo, 1978 (reprinted from Shanghai edition of 1935).

⁸ Zhao, Gang and Chen, Zhong-yi, *Zhongguo jingji zhidu shi (History of China’s Economic System)*, Beijing: Zhongguo jingji, 1991, p. 320.

monopoly,⁹ particularly in the sixteenth century when the sovereigns in the rising nation-states sought to increase national wealth and consensus by granting monopolies to local manufacturers and traders.¹⁰ The practice of monopoly in Europe is widely understood as the threshold of granting exclusive rights such as patent and printing privileges to knowledge products.

A statistical survey of China's guilds in the most industrialized lower Yangtze River region (Kiangnan) during the Ming and Qing dynasties shows that guilds of small handicraft industries, because of their limited market availability, often favoured monopoly power against new comers from other regions;¹¹ in contrast, free competition were welcomed by big industries,¹² including the textile industry in which tens of thousands of weaving machines operated endlessly, providing cloths for the entire empire and acquiring myriads of money every day.¹³ Regional merchant associations, which were based on fellow-regional ties and advocated principles of providing a delicate balance between the pursuit of diverse personal goals and the need for group support to attain them, mushroomed tremendously when embryonic capitalism expanded.¹⁴ The less monopolistic nature of these associations can be evidenced by the fact that the overwhelming majority of them were independently organized in each location without organizational connections with associations established elsewhere; merchants and artisans understood that the role of their associations was to stabilize the marketplace, not to maintain closed networks.¹⁵

Continuous efforts were made by laws and policies to regulate monopoly. The Ming law described monopoly as control (*bachi*), which means the behaviour that 'forces others to

⁹ Frank I. Schechter, *The Historical foundations of the law relating to trade-marks*, N.Y.: Columbia University Press, 1925, p. 47. Spyros Maniatis, 'Distinctive Signs and Early Markets: Europe, Africa and Islam', in *Perspective on Intellectual Property: The Prehistory and Development of Intellectual Property Systems*, ed. by Alison Firth, London: Sweet & Maxwell, 1997, 123-158, p. 139; Sidney A. Diamond, 'The Historical Development of Trademarks', 65 *TMR*, 265 (1975), p. 277.

¹⁰ Paul E. Geller, 'Must Copyright Be For Ever Caught between marketplace and Authorship Norms?', in *Of Authors and Origins: Essays on Copyright Law*, ed. by Brad Sherman & Alain Strowel, New York: Clarendon Press, 1994, pp. 159-201; p. 162.

¹¹ Hong Huan-chun, 'Ming Qing Suzhou diqu ziben zhuyi mengya chubu kaocha – Suzhou gongshang ye beike ziliao pouxi (A Primary Investigation of the Embryonic Capitalism in Suzhou Area in the Ming and the Qing – An Analysis of the Epigraphs of the Suzhou Industries and Commerce)', in *Ming Qing ziben zhuyi mengya yanjiu lunwen ji (Collections of the Studies on the Embryonic Capitalism during the Ming and the Qing)*, ed. by Institute of the Ming-Qing History Studies, Nanjing University, Shanghai: Shanghai renmin, 1981, 399-449, p. 414.

¹² Hong, 'A Primary Investigation of the Embryonic Capitalism in Suzhou Area in the Ming and the Qing', pp. 422-3.

¹³ For a brief introduction, see Liu Guoliang, *Zhongguo gongye shi (History of China's Industry)*, Nanjing: Jiangsu kexue jishu, 1990, p. 533-37; pp. 453-56.

¹⁴ Gary G. Hamilton, 'Regional Associations and the Chinese Society: A Comparative Perspective', 21 *Comparative Studies in Society and History*, 346 (1979), p. 351.

¹⁵ Gary G. Hamilton, 'Chinese Merchant Associations: Conspiracy or Compilation,' 3 *Late Imperial China* 50 (1977), pp. 62-66.

buy or sell, or prohibits others to buy or sell'.¹⁶ A notable phenomenon is that judicial attention paid to commercial activities, as those reflected by the daily judgements of Kiangnan region, was extremely wary of monopoly.¹⁷ The language used by a judgement in 1834 is quite representative: 'the first thing to be prohibited in every industry is monopoly..., [which] is extremely unjust and unfair.'¹⁸ Unless free competition threatens the subsistence of an industry, laws and policies would not consider monopoly as an instrument of maintaining the basic market order.¹⁹ As some Western scholars have argued, pre-modern China had already been imbued with some characters of modernity, which includes the belief of a free market.²⁰

The disfavour of monopoly by Chinese society is deeply rooted in Confucian belief about the importance of equality to a good society. In some ancient Confucian Classics, Confucian scholars envisaged a beautiful 'Eden' in which every individual does not need to worry about living: it is safe enough to leave doors open at night, children and the elders are comfortably supported, and the officials are elected from the competent.²¹ This attractive picture contains two facets of social life. The first one is based upon Confucian understanding of improving the living quality of the people. Confucius is aware of the importance and necessity of such improvement; he justifies the human desire of becoming richer and only condemns it when the means of earning money are wrong and improper.²² It would be a shame, as Confucius says, if a country seems to follow the Tao but remains in poverty.²³ However, the improvement of quality of living is not the only task of a perfect country dreamed by Confucian scholars. For them, economic development should be able to help the advance of every individual's spiritual level. Therefore, governmental policies and laws should only play a role to provide positive support to social improvement rather than to gain monopolistic profits or to grant

¹⁶ *Da Ming luli jijie fuli*, Taipei: xuesheng shuju, 1970, pp. 898-99. Cited from Peng-Sheng Chion, *The New Associations of Merchants and Artisans in Suzhou, 1700-1900*, Taipei: National Taiwan University Press, 1990, p. 179.

¹⁷ These judgements are often recorded on steles. Some of them have been collected in several books, although many of them do not survive. For a comment, see Chion, *The New Associations of Merchants and Artisans in Suzhou, 1700-1900*, pp. 106-9; p. 147; p. 163-5; p. 203. For original resources, see *Jiangsu sheng Ming Qing yilai beike ziliao xuanji* (*Selected Collections of the Epigraphs Appeared in Jiangsu during the Ming and Qing Dynasties*), edited by Jiangsu Museum, Shanghai: Sanlian shudian, 1959; *Ming Qing Suzhou gongshangye beike ji* (*Collection of Suzhou's Industrial and Commercial Epigraphs in the Ming and Qing Dynasty*), Suzhou History Museum, History Department of Jiangsu Normal College and Institute of Ming and Qing History of Nanjing University (ed.), Nanjing: Jiangsu renmin 1981; *Shanghai beike ziliao xuanji* (*Selected Collection of the Epigraphs in Shanghai*), Shanghai Museum (ed.), Shanghai: Shanghai renmin, 1980.

¹⁸ *Collection of Suzhou's Industrial and Commercial Epigraphs in the Ming and Qing Dynasty*, p. 81.

¹⁹ Chion, *The New Associations of Merchants and Artisans in Suzhou, 1700-1900*, pp. 176-78; 202-03.

²⁰ Other aspects include the freedom of immigration, a selection system based on examination and assessment, and the like. Gilbert Rozman, *The Modernization of China*, New York: Free Press, 1982, pp. 181-82.

²¹ *Liyun*, Li Ji.

²² 'Rich and noble are what people desire'. *Liren, the Analects*. Kuang Ya-ming, *Kongzi zhuan* (*The Biography of Confucius*), Nanjing: Nanjing daxue, 1990, p. 224.

²³ *Taibo, the Analects*.

monopoly to a small group of people.²⁴ As will be discussed below, the primary task is to develop education, economic growth and living standards, all of which fundamentally rely on an atmosphere without monopoly.

5.2. Intellectual property and knowledge dissemination

5.2.1. Copyright and free printing

The emergence of copyright protection in China has certain similarities with that in Western Europe where commercial investment notably played a crucial role in stimulating copyright protection.²⁵ However, there exists a notable difference in respect of the relationship between copyright and the public interest: in China, publishing monopoly only existed for a short period and did not play a significant role; in Europe, as compared with its short history of printing, extremely strong monopoly survived for a relatively long time and played a crucial role in every aspect of copyright history until the eighteenth century.

Monopoly did not exist in the early European publishing industry. For instance, publishing freedom to a great degree existed in early sixteenth century France where the Bible was recognized to be something that should remain free for all to print, and authors and publishers could advertise and claim their copyright freely without the fear of pre-publishing censorship.²⁶ However, from the middle of the sixteenth century, for religious and political reasons, publishing censorship became extremely strong, which in England directly resulted in the establishment of the London Stationers' Company by the Crown in 1557.²⁷ The Royal Charter granted to the Stationers' Company articulated the most distinguished character of the Company: no person within the realm of England shall practice printing unless that person is 'a member of the community of the aforementioned art or mystery of Stationery.'²⁸ This certainly banned the printing outside London,²⁹ and printing on ancient books was solely allotted within the members. Gradually copies were

²⁴ Rozman, *The Modernization of China*, pp. 208-10.

²⁵ Armstrong gives some detailed reasons of the claiming copyright privilege in early 16th century France. Elizabeth Armstrong, *Before Copyright: The French Book-privilege System 1498-1526*, Cambridge: Cambridge University Press, 1990, pp. 78-81.

²⁶ For details, see Armstrong, *Before Copyright*, p. 118; 140.

²⁷ John Feather, *A History of British Publishing*, London: Routledge, 1988, p. 18. Joseph Loewenstein, *The Author's Due: Printing and the Prehistory of Copyright*, Chicago: The University of Chicago Press, 2002, pp. 13-14.

²⁸ Loewenstein, *The Author's Due*, p. 53. Mark Rose, *Authors and Owners: The Invention of Copyright*, London: Harvard University Press, 1993, pp. 11-12.

²⁹ Feather, *A History of British Publishing*, p. 17; 41.

sold and inherited within the members as tangible properties with a strict forbiddance on outflow.³⁰ One of its obvious outcomes was that over two or three generations dozens of valuable copies were being concentrated in a few firms, and by 1640, the copy-owners became the leaders of the trade.³¹ The French approach was more viperous. Since 1686, Louis XIV fixed the number of the Paris printers at thirty-six. Successful entry into the guild required an apprenticeship and examination by both guild masters and Paris university. To become a printer also required the timely death of one of the select thirty-six and considerable savings to buy a shop and pay the stiff entrance fees exacted by the guild.³²

The consequence was unavoidable: the price of the books increased and their quality declined. Paris publishers were especially fossilized on huge amount of reproduction of the traditional religious and literary inheritance of the seventeenth century, showing inflexibility in the face of new books and the demands of the reading market.³³ The great philosopher John Locke (1632-1704) heavily condemned such monopoly and was directly involved in abolishing it. As he wrote at the end of the seventeenth century in the *Memorandum* (208-209), ‘That any person or company should have patents for the sole printing of *ancient* authors is very unreasonable and injurious to learning.’³⁴ As Chapter Seven will argue, although the early eighteenth-century English society was hostile to the publishing monopoly, the publishers and booksellers *de facto* played crucial roles in shaping our modern copyright theory. It is unlikely that without the special role of the publishing guilds the same copyright theory would be created.

The Chinese publishing industry did not have a comparable monopoly power. State monopoly on publishing did appear shortly after the popularity of xylography. As a decree of 932 AD indicated, ‘if anyone wishes to transcribe the Classics, he must copy the printed editions offered by the government.’³⁵ By the mid-eleventh century, all the Classics, the Four Books, seven of the dynastic histories and a number of newly compiled or revised dictionaries, which must have been completed by substantial efforts, had been printed out by the state publisher, the Directorate of Education.³⁶ However, unreasonable

³⁰ John Feather, *Publishing, Piracy and Politics: An Historical Study of Copyright in Britain*, London: Mansell, 1994, p. 18; p. 25.

³¹ Feather, *A History of British Publishing*, pp. 41-42. Feather, *Publishing, Piracy and Politics*, p. 20. Lyman Ray Patterson, *Copyright in Historical Perspective*, Nashville: Vanderbilt University Press, 1968, p. 47.

³² For details, see Carla Hesse, *Publishing and Cultural Politics in Revolutionary Paris, 1789-1810*, California: University of California Press, 1991, pp. 8-17.

³³ Hesse, *Publishing and Cultural Politics in Revolutionary Paris*, p. 17.

³⁴ Quoted from Rose, *Authors and Owners*, P. 33.

³⁵ Cherniack, ‘Book Culture’, p. 20. Fang Hou-shu, *Zhongguo chuban shihua (The History of China’s Publishing)*, Beijing: Dongfang, 1996, p. 96. Fang interprets this decree as a state monopoly on publishing.

³⁶ Chia, *Printing for Profit*, p. 118.

prices were forbidden. As an emperor once warned the state publisher, excessive price did not accord with Confucian principles.³⁷ In addition, printing blocks carved by the government could be freely rented by the public for reprinting at affordable prices,³⁸ and it seems that printing prohibition only included some contents, leaving other books alone.³⁹

In the Xi-ning period (1068-77) of the Song dynasty, the imperial government eventually relinquished its exclusive right to generate canonical texts by rescinding its monopoly over the printing of the *classics* because it encountered various condemnations and was practically in difficulty to run the business. From this time forward, the Classics, which were the main sources of learning, could be printed and *reprinted* freely by anybody.⁴⁰ Evidence can be seen from the advertisements of commercial publishers, which were commonly presented as ‘this book is printed in accordance with the official version’.⁴¹

A careful review of the long list of the books printed from the Song (960-1279) to the Ming (1368-1644) collected by Lucille Chia is quite convincing that no one could claim an exclusive right over the publishing of ancient books catalogued into the Classics, dictionaries, histories, geographies, school primers, medical texts, encyclopaedias, poetry anthologies, plays and ballads,⁴² in that these books had existed hundreds and even thousands of years before the advent of printing and apparently belonged to the whole society. A book thus always had several editions, as evidenced by the six editions of a phonologic work, *Guang Yun*, published in one printing centre from time to time during the Yuan.⁴³

The Ming and Qing period in particular saw more zealous efforts of free reprinting of the earlier books due to a fact that in that period the existing knowledge had accumulated to an apex, resulting in a need to tidy them up.⁴⁴ The existence of various editions in the market consequently promoted an increasing demand for top-quality reproductions, which created a specialised skill of facsimile that can identically represent the aesthetics

³⁷ Fang, *The History of China's Publishing*, p. 215. Cherniack, ‘Book Culture’, p. 42.

³⁸ Poon Ming-sun, ‘Books and Printing in Sung China (960-1279)’, Ph.D. diss., University of Chicago, 1979, p. 126. Fang, *The History of China's Publishing*, p.215.

³⁹ Also see the discussion of publishing control in Chapter Three.

⁴⁰ Cherniack, ‘Book Culture’, p. 28. Song Yuan-fang and Li Bai-jian, *Zhongguo chuban shi (China's Publishing History)*, Beijing: Zhongguo shuji, 1991, p. 233.

⁴¹ For examples, see Zhang, ‘Brief Introduction on the Publishing Advertisement of the Ming’, pp. 74-5. Song & Li, *China's Publishing History*, pp. 155-6.

⁴² Appendix A: Selected List of Song and Yuan Jianyang Imprints. For the contents of the printed books, see Chia, *Printing for Profit*, p. 5.

⁴³ Chia, *Printing for Profit*, p. 111.

⁴⁴ Song & Li, *China's Publishing History*, p.109.

of the earlier books.⁴⁵ The freedom in publishing may also explain that some *topoi* of *kung-an* fiction, some developed over hundreds of years, were often mutually copied and borrowed to be printed because they belonged to nothing but a common folk properties from which anyone could draw freely to compose his own work.⁴⁶

The occasionally employed pre-publishing censorship did not result in strong monopoly associated with guilds. The imperial rulers limited their antennae within special scopes without the involvement of publishing guilds. The strongest monopolistic control is the pre-publishing censorship of the Mongol Yuan (1271-1368), where people were racially divided into four degrees with the Han-Chinese being squashed on the bottom. Publishing censorship was carried out. As a Ming literati Lu Rong indicated, ‘manuscripts must be examined by *zhongshu sheng* (Central Administration) and then delivered to the relevant department before publishing.’ A Qing literati Cai Cheng provided more details of the procedure: ‘publishing in the Yuan was extremely difficult. A book composed by somebody somewhere must be submitted to *xueshi* (education officer). Publishing would be refused if *xueshi* considered it as improper. If *xueshi* agreed, the book must then be submitted by him to the relevant department of central government and would only be approved by the departmental meeting.’ However, there was still no guild involved and after the perdition of the Yuan books could be published freely again.⁴⁷ As a matter of fact, publishing associations were not established until 1671 when the first one appeared in Suzhou.⁴⁸

It is by the freedom of reprinting earlier books and a lack of guild monopoly that various publishing centres developed across China.⁴⁹ The rise of so many publishing centres was in fact determined by natural resources crucial to producing papers, wooden blocks and inks,⁵⁰ which were eventually determinative to the quality and price of books. In addition, the culturally and economically developed areas such as Kiangnan (south east of the

⁴⁵ Facsimile editions of earlier books were one of the four distinct achievements of the Ming printers. Wu, ‘Ming Printing and Printers’, p. 223.

⁴⁶ However, this does not mean all the fictions are lack of originality; rather, as *Pai-jia kung-an* indicated, high originality existed. Y. W. Ma, ‘The Textual Tradition of Ming Kung-an Fiction: A Study of the Lung-t’u Kung-an’, 35 *Harvard Journal of Asiatic Studies* 190 (1975), pp. 217-19.

⁴⁷ Zhang Xiu-ming, *Zhongguo yinshua shi (China’s Printing History)*, Shanghai: Shanghai renmin, 1989, p. 282; 338. Chow, ‘Writing for Success’, p. 135.

⁴⁸ Zhang, *China’s Printing History*, pp. 553-54.

⁴⁹ For a list, see, e.g., Fang, *The History of China’s Publishing*, p. 215.

⁵⁰ For a detailed analysis, see Chia, *Printing for Profit*, p. 141. The decline of printing centres is always related to such factors as war and the rise of other smaller printing centres. For an analysis, see Chia, *Printing for Profit*, pp. 150-52. This reminds us why Lyon in the late fifteenth century was a vital nexus on the main trade routes of the Continent. See Henri-Jean Martin, *The History and Power of Writing*, trans. by Lydia G. Cochrane. Chicago: University of Chicago Press, 1994, pp. 236-37.

Yangtze River) created the most prosperous printing centres such as Suzhou, Hangzhou, Nanjing and Huzhou.⁵¹

The result of such a diverse scene is rather inevitably intense competition with regard to price and quality among publishers so as to attract different groups of customers. As Chapter Four has demonstrated, rivalry was fierce. It is only by a free market that price and quality can vary, enabling customers to be clearly aware of the differences of books. A Song scholar Ye Meng-de (1077-1148) recorded the situation as follows: 'Hangzhou printed the best books, Sichuan the second-class and Fujian the worst. Printing blocks carved in the Capital are equal to those of Hangzhou but the papers are inferior. Fujian blocks are made from soft wood, making the delicate inscriptions difficult. They are most popularly sold everywhere because they are easy to be produced.'⁵² Consequently, prices must have been set according to different qualities. For instance, one could buy a low-quality commentary on the Classics published in Nanjing in 1615 with only 0.5 tael.⁵³ Coming from a culture to which printing had just been introduced, the respectable Jesuits Matthew Ricci was amazed by 'the exceedingly large numbers of books in circulation here and the ridiculously low prices at which they are sold.'⁵⁴ A survey of printing costs indicates that it was possible to produce cheap books selling for a few cash in the Qing period.⁵⁵

It is reasonable to assume that there may have existed in those flourishing printing centres a small group of publishers who attempted to monopolize the market. Fragmental evidence suggests that local publishers with the same surname could have worked together closely, and a number of publishers in a same region may have been related to one another or connected through social and intellectual ties.⁵⁶ Blocks were always inherited and transformed with publishers with close links by purchase⁵⁷ or sometimes marriage. The woodblocks of a collection of one of the greatest Tang poet, Du Fu, *Ji*

⁵¹ Chia analysed the role of education in promoting the printing industry. See Chia, *Printing for Profit*, p. 73. For the prevailing fashion of learning, education, book collecting and publishing in Kiangnan, see Jiang Qing-bai, *Ming Qing Sunan wangzu wenhua yanjiu (Studies on the Kiangnan Culture of the Ming and Qing Dynasties)*, Nanjing: Nanjing shifan daxue, 1999.

⁵² Ye Meng-de, *Shilin yanyu*, vol. 8. Cited from Lin Zheng-qiu, 'Songdai chengzhen shi da shangdian chutan (A Brief Study on Ten Forms of Shops in the Song Cities and Towns)', 2 *Shangye jingji yu guanli (Commerce, Economy and Management)* 67 (1999), pp. 72-73.

⁵³ Chow, 'Writing for Success', p. 124.

⁵⁴ Louis Gallagher (ed. & trans.), *China in the Sixteenth Century: The Journals of Matthew Ricci, 1583-1610*, New York: Random House, 1967, p. 21. Timothy Brook, *The Confusions of Pleasure: Commerce and Culture in Ming China*, Berkeley: University of California Press, 1998, p. 169.

⁵⁵ Evelyn S. Rawski, *Education and Popular Literacy in Ch'ing China*, Ann Arbor: University of Michigan Press, 1979, p. 123.

⁵⁶ Chia, *Printing for Profit*, p. 75.

⁵⁷ Chia, *Printing for Profit*, p. 32; p. 332; p. 93 and footnote 75, p. 347.

qianjia zhu fenlei Du Gongbu shi, written by Xu Ju-ren of the Song⁵⁸ and originally carved in 1312 (the Yuan Dynasty) by Yu Zhi-an's Qin-you Tang Press was transferred to Ye Rizeng of Guangqin Tang Press at least four decades latter. It is not clear whether the transfer was made by purchase, however, there is evidence that the surname of the wife of Yu Zi (Yu Zhi-an's son) was *Ye*, and the blocks might be transferred to the Ye after the death of Yu Zi in 1358.⁵⁹ Another piece of evidence is that the noted Fujian publisher Yu Xiang-duo once obtained printing blocks from his wife's clan who were famously engaging in printing.⁶⁰ Such episodes remind us of an impressive testament of a London stationer who articulated that 'the printing copies will be inherited by my granddaughter if she marries the bookseller I have agreed.'⁶¹

A more interesting phenomenon is that to regulate the intra-family competition some publishers' family regulations expressed that one must not have blocks newly carved for a title already 'owned' by another shop. The head of the relevant descent group could punish violations of this rule by imposing a fine of up to one thousand cash. However, it appears that some books still remained to be reprinted freely within the family-run businesses probably because the demand for such books was so great that there was no need to prohibit duplications.⁶²

These phenomena indicate that attempts of monopoly as human nature do happen everywhere. However, these Chinese monopolies did not prevent other Chinese outside the family to open publishing shops or to freely reprint the old books in the same place or another. They also could not prevent cheaper books being placed on the market. Nor could they obtain moral or legal justification for doing so.⁶³ If they achieved a wonderful success with a result of actual dominance in the business either locally or nationally, they would have not been blamed as this was in most of the case an outcome of commercial strategies and diligence.⁶⁴

Commercial publishing aside, the vigour of free printing was largely paralleled by various huge efforts of scholarly publishing and governmental publishing. After the invention of

⁵⁸ Chia, *Printing for Profit*, Table 1, no. 75 of Appendix A.

⁵⁹ For further detail of the transfer, see Chia, *Printing for Profit*, p. 93 and footnote 75, p. 347.

⁶⁰ Chia, *Printing for Profit*, p. 157.

⁶¹ Feather, *A History of British Publishing*, p. 69.

⁶² Cynthia J. Brokaw, 'Commercial Publishing in Late Imperial China: The Zou and Ma Family Businesses of Sibao, Fujian', 17 *Late Imperial China* 49 (1996), pp. 73-74.

⁶³ See Chapter Two for a general discussion on the social structure of pre-modern China.

⁶⁴ For the nature of a largely free competition in imperial China, see Hamilton, 'Regional Associations and the Chinese Society: A Comparative Perspective', pp. 346-61. Hamilton, 'Chinese Merchant Associations: Conspiracy or Compilation,' pp. 50-71. Chion, *The New Associations of Merchants and Artisans in Suzhou, 1700-1900*.

printing technology, China's central and local governments in every dynasty were enthusiastic about printing various books crucial to education, medicine, science and technology. These printing activities were often less commercial. Although sometimes prices were high, books printed by the government often had no copyright protection and were eligible for free reprinting. The most spectacular governmental publishing were *Yongle dadian* (The Encyclopedia of Yongle Emperor's Reign) of the Ming, which compiled 3461 different books and a list of 6793 uncollected books, and the *Siku quanshu* (Complete Library of the Four Branches of Literature) of the Qing, which compiled about 36,000 books written in 800 million words and was partly carved into 149,782 blocks before 1834.⁶⁵ The scholar-publishers also played very active roles. One of the most famous scholar-publishers, Ji-gu Ge Press of Mao Jin (1599-1659) in Jiangsu, printed some 600 titles with over 100,000 blocks that Mao himself owned.⁶⁶

The prosperity of publishing helped the development of education and book collection. Schools and colleges were established by government, individuals or rich families and existed from cities to small villages.⁶⁷ Book collection was a very important theme of China's education tradition. Governmental efforts aside, scholars were extremely active in collecting books. These activities tremendously promoted academic study.⁶⁸ The availability of a huge amount of books expended the vision of scholars, making them realize the creativity of their ancestors and contemporaries and stimulating them to create more.⁶⁹ The extreme love of books was deeply rooted in the Confucian understanding that learning and education are for the sake of one's own self.⁷⁰ Confucianism believes that every individual is equal when he is born; what a person can achieve is determined by his own efforts and therefore everyone must enjoy equal opportunity of education.⁷¹ Learning, as argued by the distinguished Neo-Confucian scholar, Tu Wei-ming, is the centre of the Analects.⁷²

⁶⁵ Song & Li, *China's Publishing History*, p.107. Zhang, *China's Printing History*, p. 549. Shiow-jyu Lu Shaw, *The Imperial Printing of Early Ch'ing China, 1644-1805*, San Francisco: Chinese Materials Center, 1983.

⁶⁶ Chia, *Printing for Profit*, p. 187.

⁶⁷ For a discussion, see Zhang Xiu-min, *Zhang Xiu-ming yinshua shi lunwen ji (Academic Essays of Zhang Xiu-ming on China's Printing History)*, Beijing: Yinshua gongye, 1988, p. 85.

⁶⁸ Taam Cheuk-Woon, *The Development of Chinese Libraries Under the Ch'ing Dynasty, 1644-1911*, Shanghai: Shangwu yingshu guan, 1935, pp. 3-4. For an analysis, see Benjamin A. Elman, *From Philosophy to Philology: Intellectual and Social Aspects of Change in Late Imperial China*, Cambridge: Council on East Asian Studies, Harvard University, 1984, pp. 141-50.

⁶⁹ Elman, *From Philosophy to Philology*, pp. 205-07.

⁷⁰ Thomas H. C. Lee, *Education in Traditional China: a History*. Leiden: Brill, 2000, p. 120.

⁷¹ Donald J. Munro, *The Concept of Man in Early China*, Stanford University Press, 1969, p. 15.

⁷² Tu Wei-ming, 'Chuantong rujia sixiang zhong de ren de jiazhi (The Value of Human in Traditional Confucian Thoughts)', in his *Rujia sixiang xinlun – chuangzao xing zhuanhuan de ziwo (A New Understanding of Confucianism – Selfhood as Creative Transformation)*, Nanjing: Jiangsu renmin, 1996, p. 65.

Therefore, it seems that the Chinese were less worried about the possible obstruction resulted in by printing as Erasmus was in the sixteenth century.⁷³ Sharing knowledge was believed to be crucial. Using knowledge to exclusively broaden one's own vision was widely condemned.⁷⁴ ⁷⁵ Monopolizing knowledge and blocking its transmission would have generated, in the words of a seventeenth-century bibliophile Cao Rong, the most hostile feelings.⁷⁶ If the transmission of knowledge was obstructed by the publishing monopoly and meanwhile creativity significantly stagnated, how can we explain that different philosophical schools swiftly sprang up in the Song and Ming and 'brain storm',⁷⁷ or, quoting Thomas Lee, the 'possible diversity of ideas' emerged in the seventeenth century?⁷⁸

5.2.2. Technology transfer and the governmental efforts

Exclusive right, particularly when it takes the shape of family craft secrecy, is likely to threaten further innovations when, for example, a family is only concerned with their own people and do not care whether a person is a good candidate to inherit the skill; it may also limit the knowledge within a small group of people and exclude female family members from practice, which may make the inventions disappear. Respectively, it can be a danger to the transmission of technological knowledge and in turn further innovation.⁷⁹

However, these side effects may not be as severe as have been imagined. The strong notion of family or clan in Chinese ethnicity *de facto* puts on the family members the burden to pass the inventions on. An eighth-century builder expressed his confidence of succeeding to his grandfather's extraordinary skill: 'when the Han-yuan Palace was repairing, a builder requested to join the team, claiming that only he can repair the tiles

⁷³ Kathy Eden, *Friends Hold All Things in Common: Tradition, Intellectual Property, and the Adages of Erasmus*, New Haven: Yale University Press, 2001, p. 173.

⁷⁴ Liu Qi, *Guiqian ji*, vol. 13. Cited from Zhou, *Book-collecting and Culture: Studies of Private Book-collecting in Imperial China*, p. 281.

⁷⁵ For the understanding of sharing the learning of the past which was promoted by seven Hangzhou bibliophiles of the eighteenth century, see Nancy Lee Swann, 'Seven Intimate Library Owners', 1 *Harvard Journal of Asiatic Studies*, 363 (1936).

⁷⁶ Huang Jian-guo & Gao Yue-xin (ed.), *Zhongguo gudai changshu lou yanjiu (Studies on Chinese Book-collecting)*, Beijing: Zhonghua shuju, 1999, p. 16.

⁷⁷ Chow, 'Writing for Success', p. 145. Conservative views argue that printing technology is merely a tool of the Chinese rulers to control their subjects rather than an instrument that lights up the revolution of thinking. See, e.g., William H. McNeill, *The Rise of the West*, Chicago: University of Chicago Press, 1963, p. 531.

⁷⁸ Thomas H. C. Lee, *Government Education and Examinations in Sung China*, New York: St. Martin's, 1985, p. 28-29. Also see Wm. Theodore De Bary, *Self and society in Ming thought*, New York: Columbia University Press, 1970, pp. 331-41.

⁷⁹ Zhao & Chen, *History of China's Economic System*, pp. 285-86.

because the Palace was tiled by his grandfather. Other workers were not convinced. So the builder asked: ‘can anyone guarantee that no *wasong* grass (*Orostachys fimbriatus*) will grow after the roof is tiled?’ Everyone was immediately convinced.’⁸⁰ Such a confidence explains a common phenomenon that many techniques can be prosperously transmitted within their families for hundreds and even thousands of years.⁸¹ For better competition, inventions could have been transmitted in a wider scope outside a family. For instance, as a noted poet Lu You (1125-1210) recorded, ‘two reputed families weaving very gentle and light silk gauze in Haozhou agreed to have long-term marriage relationship since the Tang dynasty (618-907) and their skills have lasted for over three hundred years.’⁸² Due to the unwillingness of losing inventions, the custom excluding female learners may have been loosened if no alternative choice existed. A local gazette provided a story:

The Ni family weaves a special silk named ‘Ni Silk’, which is used for covering the official memorials. The eyes of the dragons embroidered on the Ni Silk have a unique three-dimensional, bright effect. The secret could be transmitted to daughters-in-law but not daughters. Because the family has no son in this generation, the skill is transmitted to the daughter who married into another family. However, the Ni Silk brand remains.⁸³

This indicates that the Chinese are flexible in accommodating themselves to new circumstances, in which inventions may be used in a much more complicated way other than family craft secrecy. Trademark system may be employed to protect technological expansion.

To a certain degree, the family craft secrecy model is also capable of promoting further innovation not only because of the ambition of honouring the ancestors or maximizing the profits but also owing to the possibility that further improvement or breakthrough may be achievable under continuous practice. For example, the reputed and still operating pharmacy *Lei Yun Shang* established in Suzhou in 1734 has continuously made many

⁸⁰ Duan Cheng-shi, *Youyang zazhi (qianji)*, Vol. 19. Cited from Li Zhi-sheng, ‘Tangdai gongshang yezhe hunyin zhuangkuang chutan (Marriage of the Merchants and Craftsmen of the Tang Dynasty)’, 3 *Renwen zazhi (Journal of Humanism)* 76 (1997), p. 77.

⁸¹ Li Hua, ‘Lun zhongguo fengjian shehui de hanghui zhidu (On the Guild System of Imperial China)’, in *Zhongguo ziben zhuyi mengya wenti lunwen ji (Collections of the Studies of China’s Embryonic Capitalism)*, Institute of the Ming-Qing History Studies of Nanjing University (ed.), Nanjing: Jiangsu renmin, pp. 99-100.

⁸² Lu You, *Lao xuean biji*, Vol. 6. Cited from Zhang Zexian, *Tangdai gongshang ye (Industry and Commerce in Tang Dynasty)*, Beijing: Zhongguo shehui kexue, 1995, p. 105.

⁸³ *Gui’an xianzhi*, Vol. 13 (Guangxu Reign). Cited from Peng Ze-yi, *Zhongguo jindai shougong ye shi ziliao (Historical Materials of the Handicrafts Industry of Early-modern China)*, Beijing: Sanlian shudian, 1957, p. 67.

innovations in its famous prescriptions.⁸⁴ It seems that in a pre-modern society for many small business and small inventions the family craft secrecy model is not ineffective. Market always determined the demand of technology and inventions became lost often due to their devaluation.

In state-owned factories, technologies were not necessarily kept as secretly as by families because artisans in these factories did not entirely rely on exclusive rights but other aspects such as big market and government procurement for profits. The phenomenon described by the Tang poet Han Yu (768-824) that artisans were notably not ashamed of learning from each other was *de facto* regulated by systematic rules. Workshop directors had a responsibility to massively train other artisans. As recorded in *Xin Tang Shu* (New History of the Tang Dynasty), different workers had different training periods, which varied from nine month to four years. There were examinations held by assistant directors quarterly and by the directors annually.⁸⁵

Notably, the state-owned factories were often the sources of transmitting technologies to society. As the Song Huizong emperor wrote in the twelfth century, ‘the exquisite techniques of processing tea adopted by the private makers are all from *heyuan* [a place producing tea for the court] and their skills are highly developed and comparable to those of the state-owned workshops.’⁸⁶ The latest technologies were often transmitted to private workshops when the state-owned factories were unable to fulfil the huge orders sent down from the court and had to purchase the rest from the private workshops.⁸⁷ Taking an example of the porcelain making of the Ming, the high level of the private kilns manufacturing was very close to that of the state-owned factory which made purchases from them.⁸⁸ The weaving artisans of the Qing dynasty were permitted to set up their own business after their corv   was completed.⁸⁹ Some artisans used their then official titles to advertise their private workshops and claim that their quality was comparable to that of the state-owned factories.⁹⁰ The overwhelming justification that

⁸⁴ Hua Gen-yuan & Yang Nian-kun, ‘Suzhou Lei Yun Shang zhiyao chang de bianqian (The Changes of the Lei Yun Shang Pharmacy of Suzhou)’, 2 *Zhongcheng yao yanjiu (Studies of Chinese Medicine)* (1984), p. 35.

⁸⁵ *Baiguan zhi san, Xin Tang shu*, Vol. 48. Cited from Zhao & Chen, *History of China’s Economic System*, p. 270.

⁸⁶ The Song Huizong Emperor, *Daguan chalu*. Cited from Zhu Ci-shou, *Zhongguo gudai gongye shi (History of Traditional China’s Industry)*, Shanghai: Xuelin chubanshe, 1988, p. 532.

⁸⁷ Margaret Medley, ‘Organisation and Production at Jingdezhen in the Sixteenth Century’, in *Porcelains of Jingdezhen*, Rosemary Scott (ed.), London: David Percival Foundation of Chinese Art, 1993. p. 80.

⁸⁸ Zhao Hong, ‘Mingdai Taozheng yanjiu (Studies of the Pottery Policies of the Ming Dynasty)’, 1 *Taoci yanjiu (Studies of Pottery)* (1999), p. 52.

⁸⁹ Duan Benruo & Zhang Qifu, *Suzhou shougongye shi (History of Suzhou’s Handicraft Industry)*, Nanjing: Jiangsu guji, 1986, p. 34.

⁹⁰ For instance, Cui Ning, a figure of a novel *Nian yu Guanyin*, opened a private workshop making jades in Tanzhou in Song dynasty by advertising his former official status as a reputed artisan of the state-owned factory. Cited from Zhao & Chen, *History of China’s Economic System*, p. 271.

the government shall not scramble for profits with the people possibly makes the government tolerate such technology transfer. Despite some patterns and their manufacturing technologies exclusively and therefore secretly reserved for the royal family and the officials,⁹¹ many others could be used by society without severe restriction.

The secret model or exclusive right *per se* is only one side of the traditional Chinese patterns of managing technologies. As to technologies that were not skills such as pen making or tiling but those more complicated or crucial to the social benefits, they were mostly promoted by the government.⁹² In pre-modern society where livelihood was difficult to be improved without positive efforts, technologies relating to social benefits such as agriculture and medicine were apparently so crucial that unrestricted and effective transfers should be preferred.

Explicit views on unrestricted dissemination of technologies were always articulated. *Nong Shu*, which introduced many farm methods and implements, particularly newly created and invented ones, and machines and appliances for spinning and weaving silk, hemp and cotton, insisted that different methods and implements employed in different regions of China should be exchanged.⁹³ This attitude lies at the heart of a Confucian mind of caring for people, which can be indicated from the feeling expressed by Chen Chun, a member of the fourteenth-century Salt Commission of the Mongol Yuan, in his preface for *Aobo Tu* (the boiling of the ocean waves), a book of the latest salt production techniques of the Lower Yangzi River:

I wish this book would last forever and enable our latter generations to know the technique of salt production and its hardship... Those who have in mind to love the people will be moved [with deep emotion] by these illustrations and they will certainly be able to devise excellent policies to improve the livelihood of the people.⁹⁴

Continuous efforts were made by Chinese government and society to promote technologies. For the government, it seems to be a tradition that it must be committed to

⁹¹ For instance, the patterns of dragon and phoenix were exclusively used by the royal families. Chen Weiji (ed.), *Zhongguo fangzhi kexue jishu shi (History of China's Weaving Technology)*, Beijing: Kexue, 1984, p. 117.

⁹² For various examples, see e.g., Zhu, *History of Traditional China's Industry*, p. 465; 477; 518; 669; pp. 523-25; 531-32.

⁹³ Yosida Mitukuni, 'The Chinese Concept of Technology: A Historical Approach', 36 *Acta Asiatica* 51 (1979), pp. 64-66.

⁹⁴ Yoshida Tora, *Salt Production Techniques in Ancient China: the Aobo tu*, translated and revised by Hans Ulrich Vogel. Leiden; New York: E.J. Brill, 1993, pp. 156-57. The above texts are translated according to the photocopy of the original texts provided in Yoshida's book.

the idea of promoting social benefits. In every dynasty there are governmental departments active in transmitting technologies, publishing technological books and encouraging and rewarding inventions and technological transmissions.⁹⁵

Education was deemed to be essential to technology transfer. In a programme designed in the second century BC to increase farm production, the Emperor Wu's officials established an agricultural demonstration school, to which were sent local officials, village elders, and outstanding farmers. They were instructed in better farming methods and were given improved tools which they were taught to use. The plan succeeded in spreading knowledge of new methods and tools in the central provinces and among agricultural garrisons on the northern frontier.⁹⁶ Higher education in law, medicine, astronomy, mathematics and other technical knowledge on a systematic and institutional base were available in imperial China. As the considerable quantity of teachers and students as well as the educational structures indicated, the Tang government was quite conscious of the importance of such education.⁹⁷ A candidate of the Mayor of Qingzhou even defeated his rival at the final run because he got the right answer for a mathematical question.⁹⁸ Although the importance of technical education as part of the nation's educational programme became comparatively negligible from the Song dynasty,⁹⁹ officials in the Song and Yuan dynasty still had immediately useful knowledge relating to practical matters of science and technology.¹⁰⁰

Chinese rulers were notably active in seeking and distributing new innovations. For instance, in 828, the Tang Wenzong emperor was personally involved in organising the distribution of the models of a newly invented *shuiche* (waterwheel) to every city and ordered the device to be made according to the models.¹⁰¹ In 1012, the Song Zhenzong emperor sent his representative to Fukien to take the seeds of a newly introduced rice variety, *Zhancheng dao* (Champa rice), from Vietnam, distributing them immediately to

⁹⁵ For an example of the Qing dynasty. See Susan Mann, 'Household Handicrafts and State Policy in Qing Times', in *To Achieve Security and Wealth: The Qing State and the Economy*, ed. by Kate Leonard and John Watt, Ithaca: Cornell University Press, 1992.

⁹⁶ C. Martin Wilbur, 'Industrial Slavery in China during the Former Han Dynasty (206 B.C.-A.D. 25)', 3 *The Journal of Economic History* (1943), p. 66.

⁹⁷ Lee, *Education in Traditional China*, pp. 516-18. For the medical system and the relevant motivating mechanism, see Needham, 'China and the Origin of Qualifying Examinations in Medicine', in Joseph Needham, *Clerks and Craftsmen in China and the West: Lectures and Addresses on the History of Science and Technology*, Cambridge: Cambridge University Press, 1970, pp. 379-95.

⁹⁸ Zhou Han-guang, 'Shilun Sui Tang shiqi de kexue guan (On the Scientific and Technological Understandings of the Sui and Tang Dynasties)', 3 *Zhongguo zhixue shi (History of Chinese Philosophy)* 18 (1997), p. 19.

⁹⁹ Lee, *Education in Traditional China*, pp. 516-18.

¹⁰⁰ Mark Elvin, *The Pattern of the Chinese Past: A Social and Economic Interpretation*, California: Stanford University Press, 1973, pp. 180-81.

¹⁰¹ *Hequ er, Cefu Yuanguai*, Vol. 497. Cited from Zhu, *History of Traditional China's Industry*, pp. 359-60.

three provinces with publicized details of the planting techniques.¹⁰² A special and productive technique of producing coppers (*dantong fa*) invented by an eleventh-century Rouzhou layman Zhang Qian (1025-1105) was effectively adopted by the government in various places after he asked his son Zhang Jia to present it to the central government.¹⁰³

Commissioners were frequently sent to travel across the empire to understand the local needs. For instance, a reputed official Zhao Guo was encouraged by the emperor to promote his newly invented farming techniques across the country at the close of the first century BC.¹⁰⁴ The great inventor Zu Chong-zhi was commissioned in the fifth century to promote inventions across the country and was only regrettably stopped for no reason other than the war.¹⁰⁵ Local officials played key roles in introducing new inventions into areas where they were not practiced, and in encouraging its expansion where they were already being adopted. Whether they promoted the livelihood of the local people was essentially the criterion for official assessment. The practice of a sixteenth-century official Zhang Yue is rather common: he took the technological knowledge of a twenty-four-hour use of both well-sweeps and water wheels made by Fujian cultivators to Guangdong and introduced the irrigation devices to local people.¹⁰⁶ Such technological transmission was always systematic and massive. The Yuan government's remarkable success in promoting cotton planting across the empire suggests that the relevant new techniques must have been simultaneously and effectively transmitted if we take into consideration the fact that cotton planting was unable to be promoted previously due to the inferior planting and processing techniques.¹⁰⁷

Many of the above-indicated inventions are related to farming techniques, which were one of the top priorities of technological dissemination because agriculture was the foundation of people's livelihood. Throughout Chinese history, various invented farming tools and methods in general spread effectively.¹⁰⁸ For instance, newly created methods in cultivation such as deep ploughing, multiple cropping, seed selection and fertilization

¹⁰² Tuo Tuo (Toktoghan), *Song Shi (History of Song)*, Beijing: Zhonghua shuju, 1977, p. 154.

¹⁰³ Wang Xiang-zhi, *Yudi jisheng*, Vol. 23. Cited from Zhang, *Industry and Commerce in Tang Dynasty*, p. 19.

¹⁰⁴ Liu Hong-tao, *Zhongguo gudai keji shi (History of Science and Technology of Pre-modern China)*, Tianjin: Nankai daxue, 1991, pp. 205-07.

¹⁰⁵ Tong Shu-ye, *Zhongguo shougongye shangye fazhan shi (The History of the Development of China's Handicrafts Industry and Commerce)*, Jinan: Qilu shushe, 1981, p. 75.

¹⁰⁶ Timothy Brook, *The Confusions of Pleasure: Commerce and Culture in Ming China*, Berkeley: University of California Press, 1998, p. 133.

¹⁰⁷ For the cotton planting in Yuan, see Chen, *History of China's Weaving Technology*, pp. 151-12.

¹⁰⁸ Li Bo-zhong provided several examples of Jiangnan from the late 13th to the early 14th centuries. See Li Bo-zhong, 'Changes of Farm Technology in Jiangnan from the Late Song Dynasty to the Early Ming Dynasty', 1 *Zhongguo nongshi (China's Agricultural History)* (1998), pp. 18-21.

were widely employed with a rapid speed.¹⁰⁹ Local schools and organizations were commonly established; even at the village level, agricultural officers were appointed to introduce farmers to new varieties and skills.¹¹⁰

Medicine seems to be another top priority of pre-modern China because the government was convinced that medicine was the most efficient tools for saving lives.¹¹¹ Continuous efforts were made throughout Chinese history by governments and professionals to promote medicine. In 723 a book containing various formularies of prescriptions was composed by the ruling emperor Tang Xuan-zong together with his assistants, and then published and sent out to each provincial medical school. Some prescriptions were written up on notice boards at crossroads so the ordinary people could take full advantage of them.¹¹² The medieval Song government had an extreme determination to make medical knowledge as widely available to the public as possible. The Drugs Office of the Song dynasty set up in 1076 under the Board of the Grand Physician was in charge of testing new remedies submitted by the provinces; carefully approved new drugs were then included in government-sponsored compilations.¹¹³ Many efforts were made particularly in the Song period to introduce medical knowledge to remote and uncivilized minority regions such as Fukien and Canton, where witch doctors remained. Hospitals were established and local medical education was developed. Leaflets written by officials were widely distributed to inform people of the harm of sorcery.¹¹⁴

Another notable element of the technological dissemination was publishing technological books covering every aspect of social life, which started as early as antiquity,¹¹⁵ and continued throughout history.¹¹⁶ It is apparent that publishing is a more effective way of technological dissemination. As the Ming scientist Xu Guan-qi, the author of the great

¹⁰⁹ Chris Bramall and Peter Nolan, 'Introduction: Embryonic Capitalism in East Asia', in *Chinese Capitalism, 1522-1840*, ed. by Xu Dixin & Wu Chengming, London: MacMillan Press Ltd, 2000, pp. xiii-xl.

¹¹⁰ S. A. M. Adshead, *China in World History*, New York: St. Martin's Press, 1988, p. 110.

¹¹¹ Angela Ki-che Leung, 'Medical Learning from the Song to the Ming', in *The Song-Yuan-Ming Transition in Chinese History*, ed. by Paul Jakov Smith & Richard von Glahn, Cambridge: Harvard University Asia Center, 2003, pp. 377-78.

¹¹² Joseph Needham, 'Medicine and Chinese Culture', in his *Clerks and Craftsmen in China and the West*, p. 280.

¹¹³ Elvin, *The Pattern of the Chinese Past*, p. 188.

¹¹⁴ Soon after a local official submitted his memorial, in 1023 the government issued an edict listing in detail the criteria of criminal cases and judgements. See Cai Jie-en, 'Songcao jinwu xingyi xulue (A Brief History of the Policies of Prohibiting witch and Promoting Medicine in Song Dynasty)', *Yiguwen zhishi (Knowledge of Old Medical Texts)*, Vol.3, 1997, p. 6.

¹¹⁵ Liu, *History of Science and Technology of Pre-modern China*, pp. 202-03. Kao Gong Ji seems to be the most detailed technological masterpiece of that time. For many books written in ancient times introducing the technologies relating to social welfare, see e.g., Wu Baosan (ed.), *Xianqin jingji sixiang shi (History of Economic Thinking in Ancient China)*, Beijing: Zhongguo shehui kexue, 1996, pp. 322-24.

¹¹⁶ Colin A. Ronan, *The Shorter Science and Civilisation in China: An Abridgement of Joseph Needham's Original Text*, Vol. 5, Cambridge: Cambridge University Press, 1995, p. 31. For details of technological books, see pp. 57-62.

Nongzheng quanshu (Complete treatise on agriculture), articulated: ‘I have drawn the picture of the *shuizhuan da fangche* (the great water-wheeled filature) and hope the weaving industry will be benefited by imitating this device which is more cost-effective and convenient as compared with *luche*.’¹¹⁷

As has been mentioned previously, the government played a positive role in publishing. When publishing started flourishing during the Song and Yuan times, the government pursued more policies of editing and printing standard texts on medicine, mathematics, agriculture and warfare. It often sponsored new publications, such as the eleventh-century herbal of Su Song, a work based on original drawings of plants presented by different localities to the Northern Song court, and *Zhaoren benye* (Agriculture for the People) written by a commissioned official Zhou Si-mao. Such books were either distributed to provinces or sold.¹¹⁸ In 1273, 1,500 copies of the imperially sponsored agricultural books, *Essentials of Agriculture and Sericulture* (*Nongsang jiyao*), were printed and then distributed all over the country.¹¹⁹ They were always widely distributed so that even every village could have one copy.¹²⁰ Books written in previous dynasties were commonly reprinted and distributed in the following dynasties and often tens of thousands copies were printed.¹²¹ Private publishers were also interested in producing works on agriculture, elementary arithmetic and the technique of the abacus, e.g. Yang Hui’s *Mathematics for Daily Use*, printed in 1262.¹²²

Most techniques introduced in these books are workable guidance, although some are brief because of the die-out of the technologies or the family craft secrecy protection.¹²³ Government-sponsored books particularly aimed at providing operable knowledge. For instance, cane cultivation and sugar manufacturing were recommended in detail by the

¹¹⁷ Xu Guang-qi, *Nongzheng quanshu*, Vol. 18. Cited from Tong, *The History of the Development of China’s Handicrafts Industry and Commerce*, p. 224.

¹¹⁸ *Wenzong ji, Jiu Tang shu*. Cited from Zhou, ‘On the Scientific and Technological Understandings of the Sui and Tang Dynasties’, pp. 19-20.

¹¹⁹ Elvin, *The Pattern of the Chinese Past*, p. 180. Lucille Chia mentioned that the Song government was very active in printing medical books and supervising the printing qualities. Lucille Chia, *Printing for Profit: The Commercial Publisher of Jianyang, Fujian (11th–17th Centuries)*, Cambridge: Harvard University Press. 2002, p. 133.

¹²⁰ *Wenzong ji, Jiu Tang shu*. Cited from Zhou, ‘On the Scientific and Technological Understandings of the Sui and Tang Dynasties’, pp. 19-20.

¹²¹ Wang Feng-lei, ‘Yuandai de nongye jishu jiaoyu (Technical Education in Agriculture of the Yuan Dynasty)’, 6 *Neimenggu shehui kexue* (*Social Science of the University of Inner Mongolia*) (1998), p. 33.

¹²² Elvin, *The Pattern of the Chinese Past*, p. 182.

¹²³ For instance, the great technological book *Tiangong kaiwu* written by Song Ying-xing of the Ming dynasty mentioned, after recording a technique of dyeing, that ‘the dyer did not want to tell others because it was kept secretly’. Liu, *History of Science and Technology of Pre-modern China*, pp. 123-27. Song Ying-xing, *Tiangong kaiwu*, Vol. 1. Cited from Zhu, *History of Traditional China’s Industry*, p. 738.

Yuan government in *Essentials of Agriculture and Sericulture*.¹²⁴ Emperors sometimes wrote technical books themselves. Kangxi emperor personally wrote an agricultural book, which detailed every progress of farming by pellucid poems and illustrations.¹²⁵ The effect of technological transmission by publishing could be rather significant. A new sericultural technique appeared in Shandong in the late seventeenth century was effectively promoted to the remote Shanxi by a book written under the commission of the Shandong government.¹²⁶

Local industries were often promoted by governmental efforts of rewarding them. For instance, the private industry of vehicle manufacturing in the Han dynasty was attributable to governmental policies encouraging the use of such technologies.¹²⁷ The most systematic reward system existed in the technological disseminations associated with agriculture, sericulture, and other aspects fundamental to people's livelihood.¹²⁸

It was a normal practice to recruit skilled artisans as managers or overseers to teach their crafts in other regions where local people possessed no such knowledge. For instance, in 1698, the governor of Qingzhou of Shanxi Province, Liu Qi, introduced sericultural and weaving techniques from his hometown Shandong to Qingzhou after he discovered there were many tussah trees in Qingzhou. He was remembered by local people by naming the silk as *Liu Gong Chou* (Silk of Mr. Liu). Similar practices at systematic level were rather common.¹²⁹ For instance, in the Qing dynasty, various efforts were made to recruit sericultural and weaving artisans to transmit their skills to remote places. Artisans and their successful trainees were rewarded.¹³⁰ Such disseminations were often notably frequent. As a record of the second half of the nineteenth century indicated, silk weavers from Zhejiang were much in demand in Henan as instructors.¹³¹

It is likely that exclusive rights played an active role in these disseminations in ways such as technological transfer or licensing. However, rewards could be commonly applied. In

¹²⁴ Sucheta Mazumdar, *Sugar and Society in China: Peasants, Technology, and the World Market*, Cambridge (Mass.): Harvard University Asia Center, 1998, p. 36.

¹²⁵ Zhu & Guo, 'The Manchu Emperor Kangxi's Rice Planting and his techniques', pp. 233-37.

¹²⁶ Zhu Xin-yu, *Zhongguo sichou shi (The History of Chinese Silk)*, Beijing: Zhongguo fangshi, 1997, pp. 46-48.

¹²⁷ Liu, *History of China's Industry*, p. 198.

¹²⁸ For examples of the Yuan dynasty, see Wang, 'Technical Education in Agriculture of the Yuan Dynasty', pp. 31-32.

¹²⁹ *Zhoucheng xianzhi* (Guangxu Reign). For more examples, see Zhu, *The History of Chinese Silk*, pp. 47-52.

¹³⁰ Chen Ci-wang, 'Duoneng qiaosi: shougong ye de fazhan (Rich Talent and Clever Thought: The Development of Handicrafts)', in *Zhongguo wenhua xinlun: jingji pian minsheng de kaituo (A New Examination of Chinese Culture: Economy and The Development of Living Condition)*, ed. by Liu Dai, Taipei: Lianjing chubanshiye gongsi, 1983, p. 204.

¹³¹ Shih Min-hsiung, *The Silk Industry in Ch'ing China*, trans. by E-tu Zen Sun, Michigan: Center for Chinese Studies, The University of Michigan, 1976, p. 6.

the seventeenth century, a new breakthrough in cellar making for trapping enough humidity to allow cotton spinning during the many dry months in cotton-growing North China spread like wildfire, allowing a region with a population far exceeding that of any European country to produce its own textiles and greatly reduce seasonal unemployment.¹³² It is not impossible that such a newly invented method could come under the wing of family craft secrecy. But it is doubtful that a family or even a clan has enough population to secretly and exclusively make the cellars while the cellars appeared so widely. The technique therefore might have been taught to others under a licence agreement or promoted by local governments. However, licensing seemed to be visibly impractical because once such a simple technique was disclosed, it is unlikely that exclusive right could still be maintained across the whole North China where villages were far-between.

5.3. Non-intellectual property incentive models

5.3.1. Respect and moral admiration

It is widely known that in traditional Chinese society where education and knowledge were regarded as a top priority, authors and intellectuals were highly respected. How did the Chinese think about the inventors? *Kao gong ji* is one of the earliest literatures providing an explicit definition of inventor:

Sagacious men (*zhi zhe*) invent things; the skillful (*qiao zhe*) inherit and preserve them. This act is generally called manufacture. Therefore we owe the hundred kinds of artefacts to the sages... The [inventions] of hundred kinds of artefacts are the works of sages... Melting metals to cast swords, hardening clay to make potteries, building vehicles for travel, and producing ships to cross rivers are all the works of sages.¹³³

Defining inventors as sages and appreciating them in such a remarkable way well reflects the Confucian mind yearning for newness to benefit the people: those who have invented useful things must be extremely acknowledged and distinguished from others.

¹³² Pomeranz, *The Great Divergence*, p. 47.

¹³³ *Kao gong ji*, Zhou Li.

The idea that every creation owes itself to the ingenuity of sagacious men even led to a common inclination to attribute the origins of various inventions to the creativity of ancient kings.¹³⁴ As *Yi Jing* (Book of Change) provides:

When [the sage king] Shen-nong was reigning, he invented the plough and taught the whole kingdom to benefit from it... When he died, the sage kings Huang-di (the Yellow Emperor), Yao and Shun succeeded and invented ships by which people can travel much farther...¹³⁵

Attributing inventions to sage kings and sometimes their hardworking high-ranking officials¹³⁶ is not fully fictive. It is likely that in pre-historical times only kings and their officials may have had the knowledge to invent devices. More importantly, crediting inventions to sage kings well accords with the Confucian mind which considers the inventors as those who devote their hearts to society because sage kings are monumentalized for their sedulous services provided to the people. When recorded history evolves, however, more and more ordinary individuals other than the sage kings came to appear on the lists of inventors.¹³⁷ *Nong Shu* is a typical sample. For instance, it credited Liu Jing-yi as the inventor of the 'unique and marvellous' *lian mo*, which can transfer the movement to eight millstones through a train of gears when a main driving wheel is pulled by ox.¹³⁸

Throughout the history, Chinese literature highly praised the inventors in a way similar to innovations. Han Ji (159-238), who was a Prefect of Lo-ling and Superintendent of Metallurgical Production and invented furnace bellows using ever-flowing water which efficiently saved the expensive man-power and horse-power, was highly praised by an imperial edict because he 'trebly increased the benefits [of smelting]'¹³⁹. Du Shi (?-38AD), the reputed Prefect of Nan-yang was remembered in the official history *Hou Han Shu* (The Book of Latter Han) because he 'invented the *shuipai* [a hydraulic instrument] for agricultural purpose, which saves human labour, achieves efficiencies and benefits the people.'¹⁴⁰ The great inventor Zhang Heng (78-139), was not only

¹³⁴ Yosida, 'The Chinese Concept of Technology', pp. 50-51.

¹³⁵ *Xici xia, Yi Jing*.

¹³⁶ For instance, the *Gojin zhu* written by Cui Bao of the Jin states said that the South Pointing Chariot was invented by Duke of Zhou. Yosida, 'The Chinese Concept of Technology', pp. 50-51.

¹³⁷ Wang Ling has mentioned many Chinese inventors including sage kings, reputed officials and various other individuals. See Wang Ling, 'On the Invention and Use of Gunpowder and Firearms in China', 37 *Isis* 60 (1947), pp. 160-78.

¹³⁸ Yosida, 'The Chinese Concept of Technology', p. 64.

¹³⁹ *Han Ji zhuan, Wei shu, Sanguo zhi*. Cited from Zhao & Chen, *History of China's Economic System*, p. 271.

¹⁴⁰ *Du Shi zhuan, Hou Han shu*. Cited from Tong, *The History of the Development of China's Handicrafts Industry and Commerce*, p. 41.

monumentalized for his seismograph but also many other devices including a watering cart which used air pressure and pipe to save the expenses of the people.¹⁴¹

Chinese society always tries to remember inventors. The names of inventors are sometimes associated with their inventions. The usage of ‘Paper of Marquis Cai’ is a rather common way. Sometimes such usage may last for a very long time or even forever. The weaving patterns designed by Dou Shi-lun, a handicraft director of Yi-zhou City, were named after his title as ‘Pattern of Duke of Ling-yang’ for centuries.¹⁴²

The most common and ‘high-class’ fashion of appreciating inventors is to enshrine them,¹⁴³ or try to identify the originator of every industry to the inventor of the most important device employed in that industry.¹⁴⁴ Each guild or industrial association built for its originator a temple, in which his achievement was carved on stele. Of the shrines in the weaving centres of Suzhou and Shanghai there were many in which steles were set up to commemorate Huang Dao Po, a laywoman who originally introduced cotton-planting skills into that area at the close of the thirteenth century and invented devices suitable for local specialities. As a stele carved in Shanghai in 1821 provided:

The soil of Shanghai region was originally not suitable for cotton planting. Without effective skills, people had nothing to reap from the cotton plants. The Granny [Huang Dao Po] is so talented that she invented incredible device and taught the local people to overcome the shortages...For five hundred years, she gives us clothes and food. Oh! It is so vast an area that her pleasant virtue covers!¹⁴⁵

5.3.2. Wages, career opportunities and reward

Since the beginning of the seventh century, China had applied an examination system known as *keju* to select capable individuals to become officials of the government. It is commonly known that the inevitable consequence of this system was that excellent intellectuals and scholars were at the same time often officials. Robust creative activities

¹⁴¹ Tong, *The History of the Development of China's Handicrafts Industry and Commerce*, p. 42.

¹⁴² Chen, *History of China's Weaving Technology*, p. 359.

¹⁴³ Elvin, *The Pattern of the Chinese Past*, pp. 314-5.

¹⁴⁴ For a list of such inventors/ancestors, see Qu Yan-bin, *Hanghai shi (The History of Guilds)*, Shanghai: Shanghai wenyi, 1999, pp. 170-75.

¹⁴⁵ ‘Shanghai xian xinjian Huangpo zhuan ci bei (The Stele for the Newly Built Sole Shrine of Granny Huang in Shanghai County)’, in *Selected Collection of the Epigraphs in Shanghai*, pp. 45-47.

of these scholar-officials did not necessarily require extra incentives such as those provided by copyright since they well enjoyed their reputation, wages and various other benefits as officials. In addition, from the seventeenth to the nineteenth centuries, Chinese central and local governments as well as semi-official organizations widely patronized scholarly activities such as writing books and conducting academic researches.¹⁴⁶

It is noteworthy that wages and career opportunities were also available to artisans in state-owned industries. As discussed before, the family craft secrecy model was not a bad choice for small and private business to secure their profits and promote further innovations. However, the lower importance of the secret model in large-scale state-owned factories may be attributed to a fact that an effective system of rewarding could be equal, if not always superior, to the model of exclusive rights.

Some early studies often construe ancient Chinese artisans as slaves under the savage exploitation.¹⁴⁷ Quite contrarily, as suggested by the Confucian canon *Shu Jing* (Classic of Documents or Classic of History) and archaeological findings,¹⁴⁸ these artisans were not only freeman but were always mentioned equally with local officials.¹⁴⁹ According to *Qinlü*, even slaves who had special skills would be freed and waged.¹⁵⁰ Directors and managers in state-owned factories were chosen from senior and excellent artisans. The high-ranking officials of the governmental engineering department were also appointed from those artisans.¹⁵¹ There were criminals and slaves employed in factories working in unimportant branches,¹⁵² but they were irrelevant to the reward system in question. Reward system seems to be well applied even when state-owned factories started to decline after the Song dynasty.¹⁵³ Rewarding artisans was in fact considered by ancient Confucianism as equally vital as benefiting every individual.¹⁵⁴ Although in traditional

¹⁴⁶ Elman, *From Philosophy to Philology*, p. 101.

¹⁴⁷ Wu Hui, *Zhongguo shangye zhence shi* (*The History of China's Commercial Policies*), Taipei: Wenjin, 1995, pp. 5-9.

¹⁴⁸ Tong, *The History of the Development of China's Handicrafts Industry and Commerce*, pp. 7-9.

¹⁴⁹ Zhu Jia-zhen, 'Xia Shang Xizhou shiqi de shehui jingji zhuangkuang ji xueshu sixiang de yanbian (Social and Economical Conditions and the Changes of Academic Thinking during the Xia, Shang and Western Zhou Dynasties)', in *History of Economic Thinking in Ancient China*, pp. 40-43.

¹⁵⁰ *Shuihu di Qinmu zhujian* (*Bamboo Slips Excavated from the Qin Tombs of Shuihu di*), Working Group of Bamboo Slips Excavated from the Qin Tombs of Shuihu di (ed.), Beijing: Wenwu, 1978, p. 75.

¹⁵¹ Chen Tang zhuan, *Hanshu*. Cited from Song, *Handicraft Industry of the Han Dynasty*, p. 153.

¹⁵² Zhao & Chen, *History of China's Economic System*, p. P256. Also see Liu, *History of China's Industry*, p. 57.

¹⁵³ For examples of the Han and Tang dynasties when the state-owned factories were at peak, see Zhao & Chen, *History of China's Economic System*, pp. 257-9.

¹⁵⁴ Zhu Jia-zhen, 'Rujia de jingji sixiang san: Liji zhong liyun daxue zhongyong sanpian de jingji sixiang (Confucian Economic Thinking III: Economic Thinking Reflected in *Liyun*, *Daxue* and *Zhongyong* of the *Liji*)', in *History of Economic Thinking in Ancient China*, p. 522.

society artisans could be despised by the literati or the snobbish, discrimination was more ascribable to the low education of many artisans.¹⁵⁵

A skill-based wage system had been established since antiquity.¹⁵⁶ The highest wage was given to the artisans whose skills were the best.¹⁵⁷ The system of rank promotion existed. As a 1139 decree provided, ‘Wang Chang and other twenty-four artisans have served [the state] for ten years with excellent achievements;... their wages should be increased up a level.’¹⁵⁸ Wages for skilled artisans were significantly higher than the ordinary ones. As the great Tang poet Liu Zong-yuan (773-819) recorded:

An artisan went to Pei Feng-shu’s home for building work. When Pei asked him about his skills, he said: I am a professional designer good at choosing materials and organising construction. Without me, builders cannot even build a single house. My wage paid by government is three times higher than others and my charge to private house building is more or less the same.¹⁵⁹

In addition, a reward system existed in training period and from time to time within the factories. As prescribed by *Qinlü*, ‘those who can complete his training earlier will be rewarded.’¹⁶⁰ Article 7 of the Regulation of the Suzhou state-owned weaving factory provided in the 1647 that ‘artisans weaving excellent textile will be rewarded a silver plate immediately.’¹⁶¹ Regular rewards were also available from the sovereign. For instance, enormous amounts of money and gifts, normally six to ten million strings of cash, were showered every three years by the Song emperors on the ceremony of imperial fiestas on numerous people connected with the government including bureaucrats, government artisans and soldiers.¹⁶²

Most reward systems were associated with another system of name marking (*Wule gongming*), which will be discussed in Chapter Six. In addition to the trademark function of name marking, carving artisans’ names on the products of state-owned factories meant that each individual piece can be traced to its maker, which constitutes the basic evidence

¹⁵⁵ Li, ‘Marriage of the Merchants and Craftsmen of the Tang Dynasty’, p. 66.

¹⁵⁶ For details of the situation in Tang dynasty, see Zhu, *History of Traditional China’s Industry*, pp. 356-7. Duan & Zhang, *History of Suzhou’s Handicraft Industry*, p. 31.

¹⁵⁷ Duan & Zhang, *History of Suzhou’s Handicraft Industry*, p. 31.

¹⁵⁸ *Zhiguan 16/8, Song huiyao jigao*. Cited from Zhu, *History of Traditional China’s Industry*, p. 431.

¹⁵⁹ Liu Zong-yuan, ‘Ziren zhuan’, in *Liu hedong ji*, Vol. 17. Cited from Liu, *History of China’s Industry*, p. 345.

¹⁶⁰ *Bamboo Slips Excavated from the Qin Tombs of Shuihu di*, p. 69.

¹⁶¹ *Collection of Suzhou’s Industrial and Commercial Epigraphs in the Ming and Qing Dynasties*, p. 6.

¹⁶² Laurence J. C. Ma, *Commercial Development and Urban Change in Sung China (960-1279)*, Dep. of Geography, U. of Michigan 1971, pp. 140-41.

for rewarding. This system initiated since antiquity and the motive behind it was quite straightforward.¹⁶³ As the reputed official Si-ma Guang (1019-1086) indicated, ‘[the purpose of] name making is to carefully and reasonably examine the works as the base of reward and penalty..., which will stimulate the improvement of manufacturing.’¹⁶⁴ The economic rewards and the purpose of making good products make it possible that artisans relying less on exclusive rights for profit could be stimulated to make improvement and innovation. For example, the notably innovative exactitude *nuji* (crossbow) massively produced in the third century BC,¹⁶⁵ may have had a close relation with the *Qinlü*, which provided a precise reward system.

5.3.3. Reward to inventors

In China, the notion of rewarding individuals with exceptional contributions to society took shape from antiquity.¹⁶⁶ For instance, people with special skills in agriculture, stockbreeding, medicine and salt and iron industries were commonly encouraged and substantially rewarded.¹⁶⁷ The first empire Qin dynasty (221BC-207BC), although famous for its brutal militarism, designed laws to stimulate manufacturing and encourage inventions. For instance, there was a paragraph of ‘New Inventions (*Xinxian ke*)’ provided in the *Qinlü* (Qin Laws).¹⁶⁸ It seems that the Chinese certainly shared a similar idea with the Greeks: those who discovered anything for the good of the state should be honoured.¹⁶⁹

For Chinese inventors, preferment and receiving honour, title and money from the emperor or the government were not uncommon. For instance, Cai Lun, the inventor of paper, was conferred the title of Long-ting Marquis. The great doctor Sun Si-miao (c.581-

¹⁶³ For instance, as recorded in *Lushi chunqiu* (*Lu's Spring and Autumn Annals*), ‘high quality is essential so name marking shall be applied to examine the workers’. Lu Bu-wei, *Yulin pian*, *Lushi chunqiu*. Cited from Zhao & Chen, *History of China's Economic System*, p. 255.

¹⁶⁴ Sima Guang, ‘Lun caili shu’, in *Sima wenzheng gong jiachuan ji*, Vol. 25. Cited from Zhang, *Industry and Commerce in Tang Dynasty*, p. 209.

¹⁶⁵ The specifications and manufacturing of the weapons and military devices of the Qin dynasty were extremely exactitude. For instance, the errors of arrowhead did not exceed 0.2 mm. See Xi Min-qi, Wu Jing-xiang & Cheng Xue-hua, ‘Qindai gongcheng jishu yuyan chutan (A General Study of the Engineering and technical Languages of the Qin Dynasty)’, 23 *Xibei nongye daxue xuebao* (*Journal of the Northwest Agricultural University*) (1995), p. 32.

¹⁶⁶ Liu Yong-ping, *Origins of Chinese Law: Penal and Administrative Law in its Early Development*, Hong Kong: Oxford University Press, 1998, pp. 190-92.

¹⁶⁷ Ni Zheng-mao (ed.), *Pipan yu chongjian: Zhongguo falü shi yanjiu fanbo* (*Criticism and Re-construction: A Re-visit to the Studies of Chinese Legal History*), Beijing: Falü, 2002, p. 96. Du Shi-ran & Fan Chu-yu, *Zhongguo kexue jishu shigao* (*The History of China's Science and Technology*), Vol. 1, Beijing: Kexue, 1982, pp. 100-02.

¹⁶⁸ Li Jing, *Qinlü tonglun* (*A General Studies of the Law of the Qin Dynasty*), Changchun: Jilin daxue faxue xi, 1983, p. 433.

¹⁶⁹ Prager, ‘The Early Growth and Influence of Intellectual Property’, p. 112.

c.682) was honoured in a verse written by Tang Taizong emperor as the giant among physicians and the apotheosis of generations who carved out the [new] way.¹⁷⁰ Little before 230, Han Ji, an official who invented furnace bellows using ever-flowing water was rewarded and entitled as the Commander of the Metal-Workers.¹⁷¹

In terms of those industries which were especially and urgently demanded by society and the state, special policies were often issued to stimulate inventions. Taking an example of the innovative pinnacle of the Song dynasty, shipbuilding technologies were encouraged because of their importance to the naval wars¹⁷² and a national network of maritime commerce.¹⁷³ Officials always presented their inventions to the sovereign and cash rewards were offered to stimulate them to experiment and design new ships. Various types of ships were thus invented, and earlier models evolved in tune with social and military requirements. For instance, the ‘Sea Hawk’, a widely used warship of the Song period that appeared to have a form of double outrigger, evolved the efficient balanced lugsail and, with cotton coming into common use, began to substitute cloth for bamboo mats as sails. Many ocean liners were sturdily built, highly advanced and equipped with boasting staterooms, wineshops, and the service of stewards; the larger ones even had lifeboats in tow.¹⁷⁴

Rewards were also available to the inventors of various new weapons, a practice which can be notably seen from the history of the Song dynasty. For instance, in 969, Yu Yi-fang who presented a certain fire-arrow to the emperor was rewarded with silk.¹⁷⁵ In 970, General Feng Ji-sheng together with some other officers suggested a new model of fire-arrow. The emperor had it tested, and [as the test proved successful] presents of gowns and silk were bestowed upon the inventors.¹⁷⁶ In 1000, Tang Fu, a naval captain, presented models of the fire-arrow, fire-ball, and barbed fire-ball to the emperor. A reward of money was given to him.¹⁷⁷

¹⁷⁰ The Tang Taizong Emperor, *Ci zhenren Sun Si-miao song*. Cited from Zhou, ‘On the Scientific and Technological Understandings of the Sui and Tang Dynasties’, p. 19.

¹⁷¹ *Taiping yulan*, ch. 833. Cited from Joseph Needham, ‘The Pre-natal History of the Steam-engine’, in his *Clerks and Craftsmen in China and the West*, pp. 177-78.

¹⁷² Emperor Xiaozong (1163-1189) remarked that ‘the navy is our strong arm and we cannot afford to neglect it.’ Jung-Pang Lo, ‘The Emergence of China as a Sea Power during the Late Sung and Early Yuan Periods’, 14 *The Far East Quarterly* 489 (1955), pp. 502-03.

¹⁷³ For an analysis of the mature commercial network established across China, see Shiba Yoshinobu, *Commerce and Society in Sung China*, (trans. By Mark Elvin), Ann Arbor: University of Michigan, Center for Chinese Studies, 1970, p. 45.

¹⁷⁴ Lo, ‘The Emergence of China as a Sea Power’, p. 500.

¹⁷⁵ Fang Yi-zhi, *Wuli xiaozhi*, Vol. 8. Cited from Wang, ‘On the Invention and Use of Gunpowder and Firearms in China’, p. 165.

¹⁷⁶ *Bingzhi, Song shi*, Vol. 197. Cited from Wang, ‘On the Invention and Use of Gunpowder and Firearms in China’, p. 150.

¹⁷⁷ *Ibid.*, p. 168.

It is noteworthy that in pre-industrial society these reward systems for inventors could be superior to a patent system because the inventors' benefits could be better secured under the former. However, as has been discussed in Chapter Four, these advantages may be less significant in sixteenth-seventeenth century Europe where the power of the state was weak and even basic technologies were difficult to be promoted without a patent system.

5.4. The public interest vs. intellectual property: an early-modern case

What would happen if intellectual property jeopardizes the public interest in using knowledge? We do not have many cases to highlight this issue because a cluster of 'knowledge management systems' that have been discussed here seem to have worked well to fit in with pre-modern China's productivity, although these models were pre-modern, immature and rough. However, we can take a good example from the late imperial period.

Since the late nineteenth century, port treaties established between the Western power and the Manchu Qing dynasty started to require intellectual property protection for Western citizens in China. Quite contrary to Alford's argument which construes the late imperial China as a stagnant body that was totally unaware of the function of intellectual property and only learned at gunpoint,¹⁷⁸ the employment of modern intellectual property laws was not a mere implantation in an alien soil but discussed seriously by Chinese leaders and scholars. The only problem was not cultural incompatibility but economic and educational imbalance.¹⁷⁹ A general background is that although there was information about the West circulated in China, it was limited; foreign works were therefore translated at a rapidly increasing rate.¹⁸⁰ A letter that Zhang Bai-xi (1847-1907), himself a reputed scholar and the President of Peking University, sent to the Japanese envoy Uchida Yasuya in 1902 reveals the episodes as follows:

In China, few people understand the foreign knowledge and foreign languages.

Every translated book is a result of heavy investment. For instance, a book that

¹⁷⁸ Alford, *To Steal a Book*, pp. 30-55.

¹⁷⁹ For ample documents referring to the copyright debates at the turn of the century, see Zhou Lin & Li Ming-shan, *Zhongguo banquan shi yanjiu wenxian (Historical Materials for the Studies of China's Copyright History)*, Beijing: Zhongguo Fangzheng, 1999, pp. 133-259.

¹⁸⁰ For details, see E. R. Hughes, *The Invasion of China by the Western World*, London: A. & C. Black, 1937, pp. 203-08; Tsuen-hsuei Tsien, 'The Western Impact on China through Translation', XIII *FEQ*, 3 (1954), pp. 305-27.

requires ten Yuan to be published in the UK will cost thousands of Yuan in China...Therefore, it is impossible to gain profits by translating and publishing foreign books...If every Western country is willing to help China's reformation and achieve the modernization together, [she shall be aware that] it will be harmful to make a [copyright] obstruction. If China can translate more foreign books, more and more people will be able to know foreign knowledge, which will benefit both China and the West when our commercial cooperation develops. Otherwise, books will be unable to be distributed and knowledge unable to be transmitted. Eventually nobody will be interested in foreign books and consequently we all lose our benefits.¹⁸¹

This does not mean that the positive function of copyright *per se* was not realized. Theoretically copyright was justified and it was clearly understood that reasonable copyright protection would dramatically speed up China's development. Two noted reform leaders, Lü Hai-huan (1843-1927) and Sheng Xuan-huai (1844-1916), expressed their views in a telegraph to Zhang, which reads:

The purpose of prohibition of unauthorized printing [that the foreign countries requested] is identical to our [traditional term] '*fanke bijiu*' (unauthorized printing must be definitely prosecuted)... In all conscience, authors always spend many painstaking efforts to translate and publish the books composed by them; that a book is reprinted without authorization once it is published will block translating and composing more works.¹⁸²

Proposed solutions are not to entirely refuse copyright protection for the foreigners but to establish a reasonable level of protection. Various petitions appeared in the early twentieth century pressing the government to refuse to join the Berne Convention and other international and bilateral intellectual property treaties,¹⁸³ while repeated explanations were made to establish and implement a domestic written copyright law.¹⁸⁴ Lü and Sheng suggested that books from the West and Japan except those purposely composed for China and meanwhile have already been privately translated and published should be translated freely.¹⁸⁵ Japan proposed a special bilateral clause for China which

¹⁸¹ Zhang Bai-xi, 'Letter to Japanese Envoy Uchida Yasuya', 4 *History of Diplomacy of Manchu China* (1902). Cited from Zhou & Li, *Historical Materials*, p. 41. Similar views were expressed by many others. See *ibid.*, pp. 38-40.

¹⁸² *Ibid.*, p. 43.

¹⁸³ For further details of the petitions, see e.g., *ibid.*, pp. 134-35; 151-53.

¹⁸⁴ For China's copyright law of 1910, see *ibid.*, pp. 89-95.

¹⁸⁵ *Ibid.*, p. 43.

provided that books and maps completed in the Chinese language [by Japanese authors] must be protected but exceptions of free printing could be given to works composed in Japanese, translated by China or compiled in Japanese by others.¹⁸⁶

The solution might be imperfect. It however indicates a phenomenon that, although copyright *per se* is of moral and legal justification, it cannot be superficially supported without considering balance especially when a big conflict exists between social welfare and copyright. This does not mean a total abolition of intellectual property, which seems to be an inevitable choice when society requires it. As revealed by those proposals, it is to reasonable protection levels that the Chinese turned for an answer: unlike those books that had been published outside China and had already gained profit, non-protection for books exclusively written for China and published under notable investment would stifle the creativity of the authors and consequently harm the public education.

The severe conflict that late imperial China encountered was unprecedented. On the one side, freedom of reprinting of foreign books was to some degree lifeblood of the less developed China. On the other side, publishing was unprecedentedly increasing in China, making a written copyright law a must.¹⁸⁷ Such a phenomenon is not unparalleled but surprisingly similar to that of the mid-nineteenth century U.S., where British authors were not as lucky as they would have been in late imperial China -- for many years, they enjoyed entirely no legal protection in America at all.¹⁸⁸

5.5. Conclusions

The above analyses put intellectual property in a broader social context to see its relationship with the public interest in using knowledge. In addition to the recognition of exclusive rights granted to knowledge products, traditional Chinese society was fully aware of the fundamental importance of the effective dissemination of knowledge. Tremendous efforts were made to encourage free printing, technology transfer and other alternative models of intellectual property. These efforts consequently advanced education, economic growth, living standards and continuous creativity. Taking into

¹⁸⁶ *Ibid.*, p. 42.

¹⁸⁷ Tao Bao-lin, 'On the Imperative Must of the Enactment of Copyright Law', 4 *Journal of Education* (1910). Cited from *Ibid.*, p. 85.

¹⁸⁸ For the vivid episodes, see James J. Barnes, *Authors, Publishers and Politicians: The Quest for an Anglo-American Copyright Agreement 1815-1854*, London: Routledge & Kegan Paul. 1974. Meredith L. McGill, *American Literature and the Culture of Reprinting, 1834-1853*, Philadelphia: University of Pennsylvania Press, 2003.

consideration the Chinese desires of creativity discussed in Chapter Three, we can argue that such desires, together with intellectual property protection, which is a result of the commercialization of creative ideas, were for the purpose of promoting better uses of knowledge so as to continuously improve the spiritual and material levels of the entire society.

It is likely that in pre-modern China intellectual property protection and the public interest in using knowledge were largely reciprocal rather than extremely conflicting; otherwise, intellectual property might have been viewed as less justifiable. A good example is the dispute about copyright protection for the foreign authors that occurred in the late imperial period; alternative models were pursued by the Chinese to reduce copyright monopoly and promote education and knowledge dissemination.

This chapter does not lean to the conclusion that China's practices were consummate. In reality, there must have been many problems that impeded the public interest. However, these issues fall outside the scope of this research. The analyses provided here can well answer a crucial question that is closely linked to one of the themes of this research -- the Chinese realized -- at least subconsciously -- that knowledge is fundamentally important to the improvement of the public interest.

European intellectual property history is not entirely different from that of China. For instance, copyright privileges granted in sixteenth-century France and the early development of the patent system in Venice clearly reflect the European deep understanding of using intellectual property to promote the public interest. It is not until religious and political censorship became rigorous that Europe turned to develop intellectual property towards an increasingly monopolistic nature. As Chapter Seven will argue, this temporary deviation was far-reaching; it fundamentally shaped the landscape of our modern vision of intellectual property.

CHAPTER SIX

Look at My Sign: Trademarks as a Different Story

The textile industry entirely relies on the use of trade names for the purpose of identification such as indicating credit and good will. In no place are confusion and passing off tolerated.

– A trademark judgement, Shanghai area, 1659.¹

So far, trademark has not been discussed. It seems that the non-rivalrous and non-excludable nature of knowledge, which stimulated the emergence of intellectual property protection, can suitably apply to trademark. Physically trademark owners cannot prohibit infinite duplications of their marks and using these marks on inferior or faked goods. Exclusive trademark rights are necessary to the protection of trademark owners' reputations. Trademarks also protect the public interest by ensuring the customers good qualities.

However, trademark has a fundamental difference with copyright and patent. Although designing a trademark always involves knowledge creativity, trademark is not essentially associated with creating and distributing knowledge but is set up to serve the purpose of identifying goods and their owners. In this chapter, the development of trademark in Chinese history will be examined to see its processes of evolution, social functions and differences with other forms of intellectual property.

6.1. The development of trademark in China

6.1.1. Before the medieval times

More than half a century ago, when the noted trademark scholar Abraham Greenberg mentioned that 'the Lord set a sign to appear on Cain',² he must have had no intention to purport that it evidences the threshold of trademark. Cain's sign however indicates that possibly as early as the Stone Age human society started to realize the simple but crucial function of indications of distinctive marks, which initially appeared on cattle, tools and

¹ *Shanghai beike ziliao xuanji (Selected Collection of the Epigraphs in Shanghai)*, ed. by Shanghai Museum, Shanghai: Shanghai renmin, 1980, pp. 84-85.

² *Genesis 4:15, Bible*. Abraham S. Greenberg, 'The Ancient Lineage of Trade-marks', 33 *Journal of the Patent Office Society* (1951), p. 876.

chattels to identify ownership.³ Such a function evolved, as indicated by the names of the makers that appeared on the bricks found in ancient Egypt and Asia Minor, to serve the purpose of governmental regulations such as quality guarantee when political states emerged.⁴ These phenomena, as Edward Rogers pointed out, were also commonly found in Rome and Greece.⁵

China shared a similar beginning with others. The Chinese not only had a deep consciousness of the indicative function of a picture, a character or their combination, but were addicts to it, which in general can be attributed to the remarkable aesthetic effects that Chinese characters exhibited. A well-known fact is that since the Shang dynasty (sixteenth-eleventh century BC) people began to put beautiful inscriptions on animal bones and bronze vessels; in addition to commemorative records and dedications, some of them also identified ownerships.⁶

These phenomena, even if not accounting for the direct origin of trademark,⁷ at least inevitably inspired its naissance: if the indicative function of a distinctive mark was recognized in early human history, why could human society have not been inspired to use it for trademark purposes?

It is deemed that the expansion of commerce does not necessarily imply the advent of trademark. When the producers lived within a narrow circuit and under the eyes of most of those who ultimately bought their manufactures, it seems that consumers relied little on marks.⁸ It was not until the goods were exchanged in different places that the importance of trademarks began to emerge,⁹ because goods were likely to be sold in association with marks intended to indicate who made or sold them.¹⁰ This explains that in Europe trademarks started to appear in Greece and Rome when commerce developed prosperously.¹¹

³ Gerald Ruston, 'On the Origin of Trademarks', 45 *TMR* 127 (1955), p. 129. Frank I. Schechter, *The Historical Foundations of the Law Relating to Trade-Marks*, Columbia University Press, 1925, p. x.

⁴ Edward S. Rogers, 'Some Historical Matter Concerning Trademarks', 9 *Mich. L. Rev.* 29 (1910-11), p. 29.

⁵ Rogers, 'Some Historical Matter', p. 29.

⁶ For a brief introduction of the Chinese bronze arts, see Ma Cheng-yuan, *Zhongguo gudai qingtongqi* (*Ancient Chinese Bronzes*), Shanghai: Shanghai guji, 1988.

⁷ Schechter inclined to agree that these marks are the origins of trademarks. Frank I. Schechter, 'The Rational Basis of Trademark Protection', 40 *Harv. L. Rev.* 813 (1926-27), p. 814.

⁸ Schechter, *The Historical Foundations*, p. 41.

⁹ Rogers, 'Some Historical Matter', p. 39.

¹⁰ Department of Trade, The Patent Office (prepared by R.L. Moorby with assistance from D.G.A. Myall and F.J. Ward Dyer), *A Century of Trade Marks*, London, 1976, p. 1.

¹¹ Mladen Vukmir, 'The Roots of Anglo-American Intellectual Property Law in Roman Law', 32 *IDEA* 123 (1992), p. 128. Benjamin G. Paster, 'Trademarks – Their Early History', 59 *The Trademark Reporter* 551 (1969).

Greenberg humbly credited the first recorded trademark to China in the period of Emperor Hoang-To around 2698 BC, an era he believed that the art of making pottery was discovered.¹² However, due to the exiguity of obtainable historical data, some Western scholars doubted the reliability of Greenberg's comment¹³ and even totally denied that Chinese potteries were marked.¹⁴ Archaeological excavations suggest that the exchanges of goods emerged in China in the late Neolithic Age.¹⁵ However, those commercial activities were rather primitive,¹⁶ making it difficult to support Greenberg's opinion.

More attention should be paid to the Eastern Zhou Dynasty (770 BC-256 BC) when the commodity economy evolved with a much rapider speed, as evidenced by the fact that not only the state-owned industries manufactured a large number of commodities but also privately-operated handicrafts began to boom on a considerable scale.¹⁷ The existence of privately-operated handicraft industry was considered to be reasonable and beneficial by *Kao gong ji* (The Artificer's Record, c. fifth century BC), the earliest and detailed records of China's ancient industry, in which it is articulated that the lack of state-owned industries in some places was attributable to the fact that some products could be produced by the local privately-operated industries.¹⁸ *Lüshi chunqiu* (Spring and Autumn Annals, Lü Bu-wei, c.239 BC), a famous book written approximately around the same epoch of *Kao gong ji*, is another evidence. As it recorded, the craftsmen spent six months working in the state-owned workshops, leaving another six months free to work in the privately-operated ones.¹⁹ Market competition was intense. As Sima Qian (145 BC-86 BC), one of the most famous historiographers and the author of the first universal history of China *Shi Ji* (Records of the Grand Scribe), wrote, '[at that time], targeting the market was as fast as speedy, predatory beasts and vultures.'²⁰

There were various important books composed at that time which indicated that different regions, dukedoms and states started to produce specialised commodities based upon their

¹² Abraham S. Greenberg, 'The Ancient Lineage of Trade-marks', 33 *JPOS*, 876 (1951), p. 878.

¹³ Sidney A. Diamond, 'The Historical Development of Trademarks', 65 *TMR* 265 (1975), pp. 266-67.

¹⁴ M. Beyerling, 'Trade-Marks – Their Origin and Development', 32 *TM Bull* 256 (1937), p. 259.

¹⁵ Liu Guo-liang, *Zhongguo gongye shi (History of China's Industry)*, Nanjing: Jiangsu kexue jishu, 1990, p. 47.

¹⁶ Liu, *History of China's Industry*, p. 87.

¹⁷ Zhao Gang & Chen Zhong-yi, *Zhongguo jingji zhidu shi (History of China's Economic System)*, Beijing: Zhongguo jingjichubanshe, 1991, pp. 273-75.

¹⁸ Wu Bao-san (ed.), *Xianqin jingji sixiang shi (History of Economic Thinking in Ancient China)*, Beijing: Zhongguo shehui kexue, 1996, pp. 152-53.

¹⁹ *Yüe ling of Lüshi chunqiu*. Cited from Zhao & Chen, *History of China's Economic System*, p. 256.

²⁰ *Huo zhi liezhuan of Shi Ji*. Cited from Liu, *History of China's Industry*, pp. 111-12.

natural resources and handicrafts presumably for the purpose of competition.²¹ For instance, the knives from Dukedom Zheng, the axes from Song, the lancets from Lu and the swords from Wu and Yüe were famous everywhere.²² Exchanges of commodities among different and even considerably distant places consequently prospered. As recorded by the contemporaneous Confucian Xun Zi (325 BC-238 BC), '[goods are exchanged and distributed everywhere that] peasants can acquire easily their tools without making them and artisans and merchants do not farm but have enough food.'²³

In addition to marks such as geographical indications, trademarks possibly existed. Take an example of pottery. Various names of individual commercial producers were found to be marked on a significant amount of potteries excavated from ten tombs of the Warring States Period (403 BC-221 BC) in Hebei province.²⁴ Similar potteries were found in Shandong, which belonged to another dukedom and is thousands of miles away.²⁵ Another form of marks, which is presented as 'the place name + the producer's name', has also been frequently discovered in the exhumations in various locations across China.²⁶

Commercial activities became more flourishing in the Han Dynasty (206 BC- AD 220) when the government promoted policies to safeguard commerce.²⁷ An evident consequence is that rich and powerful merchants journeyed all over the country selling goods everywhere and even to the remotest frontiers.²⁸ Although excavations are rare, it is reasonable to believe that potteries were similarly marked as their predecessors. For instance, a figuline box was marked: 'In 74 BC, [made by] Zhou Zi-cai of Xian Li (a form of Chinese residential zones)'. Another mark, which reads 'in 33 BC, made by Liu Ji', was found to appear on a figuline vase.²⁹

²¹ For instance, *Yugong of Shang Shu*; *Benwei of Lüshi chunqiu*; *Huozi liezhuan of Shi Ji*. For a brief introduction, see Yang Shan-qun, 'Chunqiu zhanguo shidai siying gongshangye jianlun (Introduction of the Private-operated Industry and Commerce in the Spring and Autumn Period and the Warring States Period)', 1 *Shanghai shehui kexue yuan xueshu jikan (Quarterly of Shanghai Academy of Social Science)* 148 (1996), p. 52.

²² *Kao gong ji*. Cited from Wu, *History of Economic Thinking in Ancient China*, p.150.

²³ *Wang Zhi of Xun Zi*. Cited from *Zhuzi jicheng (Collections of the Chinese Philosophers)*, Shanghai: Shanghai shudian, 1986, pp. 102-3.

²⁴ These names are, e.g., Chen Chui, Han ?, Shi ?, Sun ? and Bu Sun. Cited from Song Zhi-min, *Handai shougongye (Handicraft Industry of the Han Dynasty)*, Chengdu: Bashu shushe, 1992, p. 84.

²⁵ Cited from Yang, 'Introduction of the Private-operated Industry and Commerce', p. 150.

²⁶ Cited from Song, *Handicraft Industry of the Han Dynasty*, p. 84.

²⁷ Tong Shu-ye, *Zhongguo shougongye shangye fazhan shi (The History of the Development of China's Handicrafts Industry and Commerce)*, Jinan: Qilu shushe, 1981, pp. 52-55.

²⁸ *Huozi liezhuan of Shi Ji*. Cited from Wang Xiang-qin and Zhong Ting-hao, *Zhongguo minzu gongshangye fazhan shi (Evolutional History of China's Traditional Industry and Commerce)*, Shijiazhuang: Hebei renmin, 1997, p. 41.

²⁹ Song, *Handicraft Industry of the Han Dynasty*, pp. 84-85.

Iron industry growth speed up in the Han and witnessed the wide application of marks. Several iron models of farming tools marked with various names of the manufacturers such as Li, Si and Shan were deemed to be produced by privately-operated workshops of the early Han.³⁰ Although for some reasonable purposes such as national defence the state once monopolized the iron industry for several decades, their products were sold as commodities on the market to the peasants,³¹ and, too, marked uniformly.³²

Marks were also commonly branded on copper products. A copper washing-utensil exhumed in Guangdong was marked 'Li Wen-shan *zhi* (made by Li Wen-shan)'. A similar mark was discovered in Shandong, which reads: 'Shu-jun Dong-shi *zao* (made by Mr. Dong of Shu prefecture)'.³³ An interesting mark was found to appear on a top-quality raw copper material made by a private producer, on which it reads: 'Sold by Tian Rong of Wan Li of Fubo, Runan (in Henan)'.³⁴

Another product on which marks were frequently to be found is lacquer ware, which achieved a very high level during the Han and was widely used in daily life. A beautiful lacquer tray exhumed in 1973 was marked on its bottom as 'Shang-li Zhu Gong *zhi* (Made by Mr. Zhu of Shang-li)'; another lacquer food box was marked, both on its bottom and cover, '*Zhong-shi* (Mr. Zhong)'. These two marks are considered to be marks of the private producers because they differ from the family name of the interred.³⁵

It is noteworthy that the mark *Zhong-shi* also appeared on a lacquer basket exhumed in another place,³⁶ strongly indicating the relation between commodity economy and the application of marks. Such a phenomenon was not rare. For instance, beautifully designed characters, which was the name of a reputed artisan, were found to be embroidered on a highly skilled Han brocade excavated on the Silk Road;³⁷ a pottery discovered in Nanjing was made in the distant Shang-yu of Zhejiang as it was marked 'in 251 AD, made by Shi

³⁰ Cited from Leng Peng-fei, *Zhongguo gudai shehui shangping jingji xingtai yanjiu* (Studies on the Forms of Commodity Economy in Traditional China), Beijing: Zhonghua shuju, 2002, p. 80. Also see Song, *Handicraft Industry of the Han Dynasty*, p. 4.

³¹ Zhao & Chen, *History of China's Economic System*, p. 251.

³² The typical mark is represented as, e.g., an iron product was marked He-san (the third branch of Henan governmental workshop). Such marks are frequently found in the exhumations of the Han. See Song, *Handicraft Industry of the Han Dynasty*, pp. 8-9.

³³ *Ibid.*, pp. 46-48.

³⁴ *Ibid.*, p. 61.

³⁵ *Ibid.*, pp. 74-75.

³⁶ *Ibid.*

³⁷ Chen Wei-ji (ed.), *Zhongguo fangzhi kexue jishu shi* (History of China's Weaving Technology), Beijing: Kexue, 1984, p. 340.

Yuan-yi of Shang-yu’;³⁸ and an ironware marked *Chuan* was exhumed both in Shanxi³⁹ and Henan.⁴⁰

As the following discussion will demonstrate, the above evidence of early existence of marks in China do not rule out a fact that a mark vitally functioned to guarantee the qualities and protect the consumers. However, it seems to be difficult to say that at its very early stage a mark solely served these functions, consisting of no concept of ‘self’ or private right. One example mentioned by Western scholars is that various Roman marks had a function of advertisement such as VTERE (use this) and EME (buy me).⁴¹

The words *zhi* and *zao* (make) that Chinese producers widely applied on their marks not only speak the paly meaning of *make* but also contain linguistic beauty to please the buyers and allure them to think that the products are exquisite. In addition, functions of advertisement seem to be clearly realized by ancient Chinese and unbrokenly thrived afterwards. A Han bronze mirror excavated in Yangzhou of Jiangsu was fascinatingly marked as: ‘Mirrors made by Mr. Wang are really sophisticated; there are angels on them who are never getting old.’⁴² Similar advertisements read as follows: ‘Mirrors made by Mr. Ye are really beautiful and excellent; they are as clear as the sun and the moon, and are rarely seen in this world’; ‘I have my own principles of making bright mirrors, which help you to have a long life and benefit your offspring’.⁴³ The state supervised workshops applied advertisement as well. An inscription appeared on a gold-inlaid iron knife of the Eastern Han (25-220) expressed in a popular way: ‘[M]ade in 184 by...[I]t will protect your offspring long.’⁴⁴

It is intriguing that these advertisements were explicitly associated with the marks or trade names of the handicraftsmen and in many occasions functioned solely to promote the ‘self’. Other common advertisements, which merely peddled ‘long life, riches and honor, and good for your offspring’, seemingly bearing no direct relation with trademarks though, reflect a phenomenon that the idea of self-promotion by trademark-originators was commercially popular and largely acceptable by the society.

³⁸ Chinese Association of Silicate Studies, *Zhongguo taoci shi (China’s History of Pottery and Porcelain)*, Beijing: wenwu, 1982, p. 139.

³⁹ Song, *Handicraft Industry of the Han Dynasty*, pp. 8-9.

⁴⁰ *Ibid.*

⁴¹ Paster, ‘Trademarks–Their Early History’, p. 554.

⁴² Liu Zhi-yi, ‘Zhongguo gudai shangbiao yu guanggao fazhan shi chutan (Brief exploration on the history of China’s trademark and advertisement)’, 4 *Hunan Baozhuang* 10 (1995), p. 11.

⁴³ Leng, *Studies on the Forms of Commodity Economy in Traditional China*, p. 81.

⁴⁴ Song, *Handicraft Industry of the Han Dynasty*, pp. 9-10; Liu, ‘Brief exploration on the history of China’s trademark and advertisement’, p. 10.

6.1.2. Medieval times

Commerce and industry approached a spectacular epoch in the united Tang China (618-907) when goods could travel more easily across the whole giant empire without severe military threats. Various geographical products, *e.g.*, different textiles made in different cities, were distributed to very remote places such as middle Asia.⁴⁵ The sizes of the factories specialising in producing certain kinds of commodities also increased. For instance, He Ming-yuan, who specialised in weaving silk, had five hundred looms and was a man of huge wealth.⁴⁶ Uses of trademarks are said to be regulated by laws,⁴⁷ which both guaranteed quality control and boosted the consciousness of rights. Many goods continued to apply the traditional format of marks. For instance, lacquer wares exhumed in several cities of Jiangsu were representatively marked as ‘*Wei zhen shang lao* ([made by] Wei; real, top quality, and firm)’ and ‘*Hu zhen* ([made by] Hu; real)’.⁴⁸ Some marks and inscriptions may however have been purely self-promotional. An inscription appeared on a top-quality jade-lustered mirror reads: ‘in December of 847, made by Bai Jiu-feng, the *senior* producer of copper industry’.⁴⁹ Another mark ‘*Li Shi* (strong man)’ appeared on several porcelains and silver flagons in different places was deemed to be a famous brand,⁵⁰ probably owing to the blooming wine industry evidenced by dozens of famous wine brands recorded in history.⁵¹

However, not until the Song dynasty (960-1279) did China commercially and industrially reach an overall, unprecedented summit as compared with its past and the rest of the world. In this period the government paid more attention to business activities and devoted itself to provide more detailed legal protection.⁵² The well-known facts that nightlong fairs thrived, paper currency originated, and populations in more than forty cities exceeded 100 thousand⁵³ are by no means accidental; rather, they relied on a much more mature national market which could effectively provide various goods to meet the

⁴⁵ Zhao & Chen, *History of China's Economic System*, p. 278.

⁴⁶ Li Fang, *Taiping guangji*, vol. 243. Cited from Liu, *History of China's Industry*, p. 304.

⁴⁷ This will be discussed in more detail in the following parts. For archaeological evidence, see ‘Tang Chang'an cheng xishi zaozhi de fajue (Excavation of the West Market of Chang'an of the Tang)’, 5 *Kaogu tongxun* (*Archaeology Studies*) (1961), p. 23.

⁴⁸ Zhang Ze-xian, *Tangdai gongshang ye* (*Industry and Commerce in Tang Dynasty*), Beijing: Zhongguo shehui kexue, 1995, p. 188.

⁴⁹ Tao Gu, *Qiju meng of Qing yi lu*, vol. 2. Cited from Zhang, *Industry and Commerce in Tang Dynasty*, p. 52.

⁵⁰ *Ibid.*, p. 72.

⁵¹ Leng, *Studies on the Forms of Commodity Economy in Traditional China*, p. 94.

⁵² Shiba Yoshinobu, *Commerce and Society in Sung China*, trans. by Mark Elvin, Ann Arbor: University of Michigan, Center for Chinese Studies, 1970, p. 45.

⁵³ Zhang Xi-wei, ‘Songdai Shangpin Jingying de fazhan jiqi lishi diwei (Developments of Commerce in the Song and their Significance in History)’, 6 *Wen shi zhe* (*Literature, History and Philosophy*) 24 (1996), p. 22.

swelling demand by city residents.⁵⁴ Such a market, as Shiba Yoshinobu indicated, was a consequence of the upsurge in agricultural productivity, the growth of regional specialization in the production of commodities upon the basis of underlying natural and geographical differences, and the development of transport and communication.⁵⁵

It is the specialization in the production of commodities that may have had closest links with the uses of trademarks. For instance, Suzhou, Huzhou and Wenzhou were known for their lacquer; Nanjing, Yuezhou, and Mingzhou (Ningbo) were known for their copperware; and Changsha for silver goods.⁵⁶ Some regions were so specialized that only certain kinds of goods were produced, leaving the necessities such as rice to be imported from other places. As a noted poet Yang Wan-li (1127-1206) recorded, ‘people in Xizhou sell tea, lacquer, paper and wood in Jiangxi, and import rice for daily consumption.’⁵⁷ These industries were mainly managed by individuals, families and guilds; state-owned factories, however, started to decline.⁵⁸

Regional marks might have had a wide use.⁵⁹ However, this did not exclude the uses of trademarks by individual producers. He Wei (1077-1145) provided a precious record of the trademark use in the region of Huangshan Mountains where Chinese sumi were prestigiously produced owing to its ample natural resources of pines. He wrote:

Zhang Chu-hou and Gao Jing-xiu in Huangshan Mountains are both sumi producers whose skills have been succeeded from generation to generation. Their sumi are excellently made and comparable to those made by Shen Gui (the most famous sumi producer in south China). Sometimes Shen Gui does not go into the mountains to collect materials but just buy from Zhang and Gao and ask them to produce sumi for him. However, they use their own *yin-hao* (trademarks and trade names) separately on their sumi products.⁶⁰

⁵⁴ For an introduction of the commerce in the Song, see Laurence J. C. Ma, *Commercial Development and Urban Change in Sung China (960-1279)*, Michigan: Department of Geography, University of Michigan, 1971. Shiba, *Commerce and Society in Sung China*, p. 45.

⁵⁵ Shiba, *Commerce and Society in Sung China*, p. 45.

⁵⁶ *Ibid.*, p. 49.

⁵⁷ Yang Wan-li, *Chen zhai ji*, vol. 34. Cited from Zhang, ‘Developments of Commerce in the Song’, p. 22.

⁵⁸ Zhao & Chen, *History of China’s Economic System*, p. 260.

⁵⁹ Geographical indication was a common practice in pre-modern Europe. See Paster, ‘Trademarks – Their Early History’, p. 560. Leon E. Daniels, ‘The History of the Trade-Mark,’ 7 *TMR Bull* 239 (1911), p. 263.

⁶⁰ He Wei, *Chunzhu jiwen*, vol. 8. Cited from Kong Jing-wei, ‘Guanyu Zhongguo ziben zhuyi guanxi mengya (About the Embryonic Capitalism of China)’, in *Ming Qing ziben zhuyi mengya yanjiu lunwen ji (Collections of the Studies on the Embryonic Capitalism during the Ming and the Qing)*, ed. by Institute of the Ming-Qing History Studies, Nanjing University, Shanghai: Shanghai renmin, 1981, pp. 75-86. Also see Zhu Ci-shou, *Zhongguo gudai gongye shi (History of Traditional China’s Industry)*, Shanghai: Xuelin, 1988, p. 541.

This indicates a phenomenon that mostly occurs in a larger scale production that a trademark's intangible values become more obvious. Such individual uses of trademark could be common because many specialized suppliers existed to produce exclusively certain kinds of products for one or two merchants who came on schedule to purchase the goods and sold elsewhere. Hong Mai (1123-1202) provided a vivid record in his famous book *Yijian zhi*: 'an ordinary person Chen Tai of Fuzhou started his business by buying and selling cloth. He loans annually to weavers of [several places]...and goes there to collect the products in every June. He has been doing this for many years.'⁶¹

Thus, it seems that an environment of specialization and trans-regional trade favouring the uses of trademarks emerged. Such an environment continued to develop in the Yuan (1271-1368), an era which is more familiar to the West largely owing to Marco Polo's enchanting itinerary.

Trademarks were widely applied in various industries in the Song and the Yuan. Take the example of the pottery manufacturing first. An exquisite porcelain headrest produced by *Cizhou yao*, the biggest kiln of north China was marked with aesthetic flavour of self-promotion, which ornamentally appears on the right upside of a tiger drawn on the top of the headrest: 'in 1032, made by Qiao Yue (beautiful moon) and inscribed by the inebriate Qing-shan Dao-ren (green-hill Taoist) in Shayang.'⁶² Such an elegant mood of design was closely connected with the booming porcelain industry of the Song, in which market demand was considerable and individual workshops produced a variety of shapes at any one time.⁶³ However, private marks more commonly used were inscribed on the bases of items with different family names of different private-owned workshops,⁶⁴ probably because such formats could be more cost-effective. Lacquer wares produced by privately-operated workshops were mostly marked with the names of the handicraftsmen or the workshops.⁶⁵ Many of them continued to apply the traditional way to indicate the qualities. For instance, a lacquer bowl exhumed in Wuhan was marked as follows: 'made in the year of Bin-xu by Xing's family; top quality and firm.'⁶⁶

⁶¹ Hong Mai, *Yijian zhi zhi*, vol. 1, collection A. Cited from Zhang, 'Developments of Commerce in the Song', p. 27.

⁶² Lin Zheng-qiu, 'Songdai chengzhen shi da shangdian chutan (A Brief Study on Ten Forms of Shops in the Song Cities and Towns)', 2 *Shangye jingji yu guanli (Commerce, Economy and Management)* 67 (1999), p. 71.

⁶³ Chen Bai-quan, 'The Development of Song Dynasty Qingbai Wares from Jingdezhen', Anthony Hua-tien Lin (trans.), in *Porcelains of Jingdezhen*, ed. by Rosemary Scott, London: David Percival Foundation of Chinese Art, 1993, p. 25.

⁶⁴ Chen, 'The Development of Song Dynasty Qingbai Wares', p. 24.

⁶⁵ Zhu, *History of Traditional China's Industry*, p. 518.

⁶⁶ Liu, 'Brief exploration on the history of China's trademark and advertisement', p. 11.

The vivid picture that signifies the self-consciousness reflected in trademark uses shall be credited to the publishing industry. Trademarks, which were normally printed on books together with contact details in the Tang,⁶⁷ were swiftly replaced when private and commercial publishing boomed in the Song by ornate pictures, such as ancient wine vessels, *guqin* (Chinese zither), flags and curtains, dragon tablets, calabashes, and steles, together with publishers' trade names represented by exquisite characters.⁶⁸ Decorative results may have increased in Mongol Yuan and marks representing different shapes of pictures and stamps could be found on different pages of one book for the possible purpose of anti-counterfeiting. For instance, a medical book edited by Zhang Cun-hui of the Hui-ming Xuan Press was marked on its head page an exquisitely decorated picture followed by a *guqin* stamp countermarked with 'stamp of Zhang's House of Ping-yang City' and a bell stamp countermarked with 'stamp of Hui-ming Xuan'.⁶⁹

It is extremely noteworthy that printing technology *per se* created an opportunity by which not only trademarks were increasingly used by publishers but also they could be printed on papers for various manufacturers to satisfy self-promotion. As the following two existing samples will suggest, it is reasonable to presume that paper-based trademarks and advertisements were not haphazard but employed proficiently.

The earliest existing sample is a trademark copperplate housed in China's National History Museum. This trademark copperplate, which belonged to a needle shop of Liu's family living in the period of North Song (960-1127), was beautifully and exquisitely designed on its top with a lovely white rabbit pestling herbal medicine.⁷⁰ Such a figurative mark could be rather creative and of deliberation because it seems that the designer visualized a famous story encouraging children to study diligently with an extreme endurance of rubbing a pestle to needle, and meanwhile, probably was inspired by a widely known legend that a white rabbit lives around a tree in the moon, pestling herbs for the fairies. The whole picture is combined with an advertisement represented in masterly calligraphy as follows:

⁶⁷ Yuan Yi, 'Zhongguo gudai chubanye de shangbiao yanjin (Trademarks Evolution in China's Traditional Publishing Industry)', 3 *Zhonghua Shangbiao (Trademark China)* (1999), p. 64.

⁶⁸ Shi Yong-qin, 'Gushu paiji de yanbian ji leixing (Evolvment and Styles of Colophon in China's Traditional Books)', 12 *Chuban faxing yanjiu (Publishing Studies)* 146 (2000), pp. 147-48.

⁶⁹ Shi, 'Evolvment and Styles of Colophon in China's Traditional Books', p. 147.

⁷⁰ Liu, 'Brief exploration on the history of China's trademark and advertisement', p. 11. One thing to note is that Alford describes this trademark as 'crude white rabbit drawing', which well accords with his view that only few of those whose livelihood relied on commerce had a sense of trademark. The impression of 'crude' may be a direct result of Alford only seeing a blurred photocopy of the mark from some poorly printed journal papers. See William P. Alford, 'Don't Stop Thinking About ... Yesterday: Why There was No Indigenous Counterpart to Intellectual Property Law in Imperial China,' 7 *J. Chinese L.* (1993), p. 20.

Needle shop of Liu's family in Jinan [of Shandong] purchases the top-quality steel, making them into refined needles. Discounts are available to wholesalers. Please remember the White Rabbit as our Trademark.⁷¹

Another existing sample is a bicolour wrapper for pigments produced by Wei's family of the Yuan (1271-1368), which was magically preserved in a joint burial of the early fourteenth century. The face of the wrapper is decorated with upended lotiform leaves, annular flowers and a lotus throne, depositing an advertisement in the middle, which reads:

Wei's family is located opposite to the Grand Priestess Temple, White Pagoda Street, Shengping Fang (Peace Zone) of Tanzhou City (Changsha of Hunan). We produce top-quality pigments such as cinnabars, gamboges and purified cinnabars swiftly sifted by two working procedures with matchless bright-coloured red and violet. Customers are free to test our pigments personally to see the total differences compared with those of other producers. Our customers, far or near, are reminded to please remember the high tablet painted with a character of *hong* (red) on the top of our storefront.⁷²

This wrapper was ingeniously designed to achieve a wonderful advertising result because folding it according to its original creases presents a rectangular shape with pictures and stamps felicitously appearing on different places of the face and the back of it.⁷³ It is reasonable to suppose that the *hong* (red) character on the tablet was intended to indicate their bright-coloured pigments and we could even assume that the colours painted on the wrapper were produced by the Wei.

There are several other stamps appearing on the wrapper. One of them is decorated with cloud veins on its top and annular cinquefoil flowers on both sides, containing another advertisement in the middle: 'Dear customers: please remember that...our shop is an ancestral one... please remember our trade name and mark.' The said trade name seems

⁷¹ Liu, 'Brief exploration on the history of China's trademark and advertisement', p. 11.

⁷² For a detailed record of this trademark, see Liu, 'Brief exploration on the history of China's trademark and advertisement', p. 11.

⁷³ For a photocopy of this trademark, see Fan Lu-bin, 'Jiju yingxiao celüe de Yuandai shangbiao – Hong zi gao pai yanliao (The Great Commercial Strategy of the Yuan Trademark – the Hong zi gao Mark of Pigments)', 4 *Zhonghua Shangbiao (China's Trademarks)* (1997), p. 43.

to appear on another stamp adorned with *bian-zhong* (ancient Chinese serial bells) designs.⁷⁴

The uses of paper, as demonstrated by the copperplate, which was a matrix of paper duplications, and the wrapper that surely spread everywhere together with each product, well indicate the social demand of a wide distribution of copies of trademarks. Moreover, the strong flavour of self-promotion such as ‘comparative advertising’ suggests that a trademark primarily pointed to the relevant individual producer rather than the whole geographical products or guilds.

6.1.3. From the fourteenth century to the early twentieth century

Although it is frequently considered that between about 1300 and 1500 the Chinese empire fell into a decline from which it only recovered slowly,⁷⁵ this does not deny the quantitative growth of economy which could form a sufficient ground for the expansion of trademarks in the Ming (1368-1644) and the Manchu Qing (1644-1912). Goods were distributed everywhere; even in the most remote place, almost everything relating to daily life from all over the country could be found on the market.⁷⁶

More importantly, from the first half of the sixteenth century, embryonic capitalism started to emerge, initially from Suzhou, Shanghai and their satellite towns, which became the richest region from the twelfth century with a broad definition as Kiangnan (south-east Yangtze River).⁷⁷ The ample existence of documents and stele inscriptions well reflect the then industrial and commercial prosperities and legal protections behind them.⁷⁸

⁷⁴ Three other stamps are unrecognisable except a basket picture on one of them. See Liu, ‘Brief exploration on the history of China’s trademark and advertisement’, p. 11.

⁷⁵ Mark Elvin, *The Pattern of the Chinese Past: A Social and Economic Interpretation*, California: Stanford University Press, 1973, p. 200.

⁷⁶ Angela Ning-jy Sun Hsi, *Social and Economic Status of the Merchant Class of the Ming Dynasty, 1368-1644*, London: University Microfilms International, 1972, pp. 41-43. Tong, *History of the Development of China’s Handicrafts Industry and Commerce*, pp. 251-64.

⁷⁷ For an earlier research, see Fu Yi-ling, ‘Ming Qing shidai Jiangnan shizhen jingji de fenxi (Analysis on the Economy of the Kiangnan Cities and Towns of the Ming and Qing)’, in *Collections of the Studies on the Embryonic Capitalism during the Ming and the Qing*, pp. 297-300; Du Li, ‘Yapian zhanzheng qian susong diqu mianfangye shengchan zhong shangpin jingji de fazhan (Evolution of the Commodity Economy in the Textile Industry of Suzhou and Sungkiang before the Opium War)’, in *Collections of the Studies on the Embryonic Capitalism during the Ming and the Qing*, p. 383.

⁷⁸ The main sources are: *Selected Collection of the Epigraphs in Shanghai*; *Ming Qing Suzhou gongshangye beike ji (Collection of Suzhou’s Industrial and Commercial Epigraphs in the Ming and Qing Dynasty)*, ed. by Suzhou History Museum, History Department of Jiangsu Normal College and Institute of Ming and Qing History of Nanjing University, Nanjing: Jiangsu renmin, 1981.

Considering an example of the porcelain industry of Jingdezhen, state control, which was irregular and often indirect, was exercised through orders for court porcelain, official supervision and taxation, and was never monolithic or dominant.⁷⁹ The growth in the commercial porcelain market system, being an important feature of the sixteenth century, was of great significance in south China and continued steadily.⁸⁰ Reading in the literature of the China two or three centuries before the modern age, there are moments when it is hard to believe that an industrial revolution had not begun: ‘Tens of thousands of pestles shake the ground with their noise. The heavens are alight with the glare from the fires, so that one cannot sleep at night. The place has been called in jest ‘The Town of Year-round Thunder and Lightning’.’⁸¹

A consequence would be that a large market existed well behind this palmy commercial manufacturing. The phenomenon that, as a local gazette recorded, rich merchants all gathered in the town, buying the products to be distributed across the whole empire and all over the world⁸² was not occasional. The growth of the market therefore created a demand that the quality associated with trademarks became more important to the purchasers who lacked the discrimination to tell good from bad than the qualities of the objects.⁸³ As the following part will show, it was revealed in several trademark cases that the commercialization made the commodities *entirely* depend on trademarks.

Descriptions of famous brands recorded in many local gazettes applied the same tone which a modern mind may be more acquainted with. A Kiangnan literati wrote in the eighteenth century: ‘the most famous linear incenses shall still be credited to [the trade name] *Shuang-mao-sheng* (double luxuriant and vigorous) near the New Bridge in Ping-jiang Road and Duanmu’s family in Lian-xi Zone; the cosmetic powder, however, ascribes its top quality to [the trade name] *Yue-zhong-gui* (moon laurel).’⁸⁴

⁷⁹ Michael Dillon, *A History of the Porcelain Industry in Jingdezhen*, PhD dissertation, University of Leeds, September 1976, p. 201.

⁸⁰ Margaret Medley, ‘Organisation and Production at Jingdezhen in the Sixteenth Century’, in *Porcelains of Jingdezhen*, pp. 72-73. Dillon, *A History of the Porcelain Industry in Jingdezhen*, p. 36.

⁸¹ Wang Shih-mao’s description of Jing-de-zhen. Citing from Elvin, *The Pattern of the Chinese Past*, p. 285.

⁸² *Gazette of Fu-liang County*, Dao-guang reign (1821-50). Cited from Wang Yu-xin, ‘Qingdai qianqi shougongye jingji de xingzhi he tedian – dui shougongye ziben zhuyi mengya fazhan shuiping de jiben guji (The Natures and Characteristics of the Handicraft Industry of the Early Qing – an Evaluation of the Level of Embryonic Capitalism of the Handicraft Industry)’, in *Collections of the Studies on the Embryonic Capitalism during the Ming and the Qing*, pp. 265-66.

⁸³ Craig Clunas, *Superfluous Things: Materials Culture and Social Status in Early Modern China*, Cambridge, England: Polity Press, 1991, pp. 61-63. Timothy Brook, *The Confusions of Pleasure: Commerce and Culture in Ming China*, Berkeley: University of California Press, 1998, pp. 226-27.

⁸⁴ Gu Zhen-tao, *Wumen biaoyn*, Appendix. For a detailed list of the famous products, see Duan Ben-ruo & Zhang Qi-fu, *Suzhou shougongye shi (History of Suzhou’s Handicraft Industry)*, Nanjing: Jiangsu guji, 1986, pp. 104-07.

Trademarks continued to be used. In the porcelain industry, privately-operated factories always indicated their trade names on the bases of the ware, which seems to be a routine. As recorded in a local gazette, division of labour was rather mature in the industry, allocating *exclusively* the job of putting marks on the ware to *luo-kuan gong* (workers of marks-inscribing).⁸⁵ These porcelain marks usually comprise four characters containing specially and beautifully designed names of the producers as sort of guarantee of excellence.⁸⁶

More dynamic achievements shall again be credited to the publishing industry. Thanks to more complicated technologies such as process printing and the grater quantities of the published books still available, we are able to know more about the ‘self’ behind a mute trademark. An advertisement printed on the head page of *Wanyong zhengzong bu qiuren quanbian* (Handbook for myriad use) edited by a famous Ming publisher, Yu Xiang-dou, well reflects that he was quite complacent about his new work: ‘This Hall recently printed this book. I name it Myriad Use because it is systematically classified, containing all the information you may need...Customers are advised to please remember the mark, *San-tai*.’⁸⁷ Such a tone was not rare but common. For instance, a reference book was marked as ‘this book is originally printed by this Hall and customers are advised to remember our mark, *Yuan-tai*’; and a novel’s mark reads: ‘customers are advised to remember our mark, *Shuang-feng Tang* (Two Hilltops Hall)’.⁸⁸

Figurative marks were used in a more decorative way containing various forms of calligraphies and pictures. A reference book originally published in 1612 by An-zheng Tang Press announced on its head page: ‘We use two pine trees as our mark. Please check it in the book and avoid mistakes.’⁸⁹ Although many of them might be considered as less creative to a modern mind,⁹⁰ it is worthy to explore the deliberation aiming to achieve a more distinctive, pleasing and aesthetic result. For instance, Bao-yin Zhai (Jade Stamp

⁸⁵ *Gazette of Fu-liang County*, Dao-guang reign (1821-50). Cited from Tong, *History of the Development of China’s Handicrafts Industry and Commerce*, p. 308.

⁸⁶ Evidence can be found, for instance, from the considerable amount of porcelains discovered in the Kenya coast where the Chinese porcelains arrived to be distributed elsewhere during the fourteenth-nineteenth centuries. At least six different trademarks, represented in the format of, e.g., ‘Bai-yu Tang zhi (made by White Jade Hall)’, can be identified. Caroline Sassoon, *Chinese Porcelain Marks from Coastal Sites in Kenya: Aspects of Trade in the Indian Ocean, XIV-XIX Centuries*, Oxford: British Archaeological Reports International Series, 1978, p. 34; p. 84; p. 86; p. 88.

⁸⁷ Lucille Chia, *Printing for Profit: The Commercial Publisher of Jianyang, Fujian (11th–17th Centuries)*, Cambridge: Harvard University Press, 2002, pp. 217-18.

⁸⁸ Yuan, ‘Trademarks Evolution’, p. 64.

⁸⁹ Zhang Chuan-feng, ‘Mingdai keshu guanggao shulüe (Briefing of the Ming Publishing’s Advertisement)’, 1 *Huzhou shifan xueyuan xuebao (Journal of Huzhou Normal College)* 74 (2000), pp. 74-80; p. 78.

⁹⁰ Pre-modern European marks were also less creative and distinctive. For a collection of those marks, see F. A. Girling, *English Merchants’ Marks: A Field Survey of Marks made by Merchants and Tradesmen in England between 1400 and 1700*, London: Oxford University Press, 1964.

House) of Zhejiang applied a twin-stamp shaped as an ancient Han styled jade pendant,⁹¹ implying their trade names by pictures combined with *stamp* and *jade* artistically. A mark appeared on *Quan you xin jian*, a precious medicinal book of pediatrics printed in 1468 was vividly presented as a child holding a tablet containing ‘Quan-you Tang *ji* (Mark of Caring-Children Hall)’ and ‘Yu-feng Shu-Yuan (Jade Peak College)’.⁹²

The remarkable attention paid to trademarks can also be found in the efforts of carefully maintaining them. Da-ning Tang (Great Peace Hall), a pharmacy established in 1620, which was subject to a change of its name to Da-ning Tang (Great *Concentration* Hall) in the 1820s due to the tradition that any character identical to the ruling emperor’s name(s) must be replaced, immediately resumed its original trade name after the death of the Daoguang emperor.⁹³ This rather suggests that there must be something of great value behind the trademark. Quite apparently it is, in Schechter’s worlds, the individual goodwill that directly relates to customers and market.⁹⁴

A reasonable consequence is that in such a market where commerce was continuously developing trademarks must have been found of increasing significance for leasehold and conveyance simply because they were profitable. Such practices were however sometimes suspected because of a worry about confusion and potential damage to reputation. A renowned Confucian-merchant, Hu Rong-ming, refused a request of renting his trade name with a high price because he claimed that ‘if the renter is really truthful, he can establish business by himself and desires no dependence on my fame; that he wants to borrow my name implies his dishonesty and this will eventually damage my reputation.’⁹⁵ This probably also explains why in 1759 a Zhejiang druggist Mr. Mu designed a new trademark, Mu Tai-shan (Taishan Mountain of the Mu), for his newly transferred pharmacy in Suzhou,⁹⁶ and a Qing pharmacy, Liu Zhi-he Tang (Delivering-harmony Hall of Liu’s family), was renamed Zhi-he Tang when it was conveyed to Zhang Dang-yun.⁹⁷ As the following discussion on several legal cases will illustrate, the values of trademarks existed as a long tradition and were supported by laws.

⁹¹ Zhang, ‘Briefing of the Ming Publishing’s Advertisement’, p. 75.

⁹² Shi, ‘Evolution and Styles of Colophon in China’s Traditional Books’, p. 148.

⁹³ Chen Xin-qian, ‘Jiefang hou shangzai jingying de Mingdai zhongyao lao zihao juyao (Examples of the existing Ming Pharmacies in the post-1949 era)’, 9 *Zhongguo yaoxue zazhi (Journals of Chinese Pharmacy)* (1999), pp. 631-33.

⁹⁴ Schechter, *The Historical Foundations*, p. 47.

⁹⁵ *Gazette of Qian Country*, vol 6/B, Tong-zhi reign (1862-74). Cited from Chen Xue-wen, ‘Ming Qing shangren jingying guifan yu zhiye diode de qutong (The Trend of the Business Ethics of the Ming and Qing Merchants)’, 1 *Journal of Northeast Normal University* 15 (1999), p. 17.

⁹⁶ Tao Yi-wu & Hua Gen-yuan, ‘Suzhou Mu Tai-shan yaodian dian shi (History of the Suzhou Mu Tai-shan Pharmacy)’, 1 *Zhongcheng yao yanjiu (Studies on Chinese Traditional Medicine)* (1984), p. 39.

⁹⁷ Chen Xin-qian, ‘Qingdai de zhongyao dian lao zihao (Famous and Old Pharmacies of the Qing)’, 4 *Zhonghua yishi zazhi (Journal of Chinese Medical History)* 238 (1996), p. 243.

6.2. Some existing trademark cases

Given the historical picture portrayed above, it is reasonable to assume that trademark protections safeguarding the identification function of trademark had existed for a long time in China. However, existing examples are rare. The earliest available record, which was inscribed on a stone tablet in 1659, refers to a judgement followed by thirty-seven signed trade names of the textile industry in Suzhou and Sungkiang area (in Shanghai):

[It is clear that] the textile industry *entirely* relies on the use of trade names for the purpose of identification such as indicating credit and good will. In NO place are confusion and passing off tolerated...It is hereby declared that such behaviours shall be *permanently* prohibited and this judgement will be inscribed on the stele [to inform the public]...[E]very one in the industry shall print and stamp his *own* mark before selling and make no confusion; otherwise, disputes will rise and the prosecution will take place, which will eventually bring inconvenience to oneself...[The functions of] trademarks have been realised for a *long* time and justified by *precedents*...How dare the profiteering broker, Shen Qing-chen, monopolize the trade, copy the trademark without authorization, and produce inferior cloth, confusing the real with the counterfeit and begetting lawsuits from so many merchants. It has already been concluded that the trade name, Jin *San-yang*, shall be returned to its originator and the thievish Shen Qing-chen be punished...Every merchant and agent shall do his own business honestly. If anyone dares to covet trademarks belonging to others and create confusion, resulting in disputes and obstruction to the governmental taxation and the industry..., he will be strictly penalized by law and no mercy will be shown.⁹⁸

Another judgement appeared in 1736 and again on a stone tablet discovered in the Shanghai area:

The textile industry strikingly prospers in the areas such as Suzhou and Shanghai. It is *only* by trade names that the qualities of goods can be identified. Thus, since the past a famous trade name can be *rented* out and *sold*, thereby treating it as *capital*. Some profiteers then establish no trade name but solely

⁹⁸ *Selected Collection of the Epigraphs in Shanghai*, pp. 84-85.

covet the famous trade names by creating confusion on the pronunciations or the characters of the trade names so as to monopolize the trade. This results in disputes and hinders the merchants. Therefore, in 1659 and 1703, confusion on trade names *San-yang* and *Yuan-?* were prohibited by judgements... The following is now accepted: according to the petition of the cloth merchants, Zhu Tai-yuan, Li Hong-sheng and Zhu Yong-zhen, cloths produced in Sungkiang are superior to those produced elsewhere. Many workshops with trade names have operated for a long time before our Dynasty (the Qing, 1644-1912), benefiting the social economy and taxation... Every shop conscientiously follows its own trade name and mark inherited from the ancestors, providing genuine goods fitting their prices. Although hundreds of years have passed, counterfeiting has never occurred... It will be reasonable to register each trade name separately and submit to the government for examination. However, because local examination may be difficult to thoroughly prevent passing off in other cities, it will be reasonable to erect a stele outside the prefectural governmental office, making every person informed... It is hereby declared that every merchant shall only use his own trade name, figurative mark, shop sign and store name. Confusion will be carefully investigated.⁹⁹

The sixteenth-seventeenth century Kiangnan textile industry saw the rise of embryonic capitalism and intense competition, which possibly explains the increase in trademark disputes. As the above cases indicated, trademarks were used to a great extent. There is other evidence supporting this. A local gazette wrote, 'there are many people in Suzhou engaging in producing cloths... every *zi-hao* (trade name) has well-organised labour divisions and is normally supported by dozens of families specialising in different procedures.'¹⁰⁰ These trade names were borne by these shops on every product they made personally or under their supervision.¹⁰¹ Managers of the local Textile Association were authorised by its regulation to carry out duties including identification of trade names for the purpose of preventing confusion.¹⁰²

⁹⁹ *Ibid.*, pp. 85-87.

¹⁰⁰ *Chongxiu Yuan-he xian zhi*, vol. 10. Cited from Zhu, *History of Traditional China's Industry*, p. 913.

¹⁰¹ Duan & Zhang, *History of Suzhou's Handicraft Industry*, pp. 94-95.

¹⁰² Du Li, 'Yalian zhanzheng qian Shanghai hanghui xingzhi zhi shanbian (Evolution of the Commodity Economy in the Textile Industry of Suzhou and Sungkiang before the Opium War)', in *Zhongguo ziben zhuyi mengya wenti lunwen ji (Essay Collections of the Embryonic Capitalism of China)*, ed. by Institute of Ming and Qing History of Nanjing University, Nanjing: Jiangsu renmin, 1983, p. 155.

These two judgements were generated not randomly but by dint of clear investigation and legal analysis with reference to precedents. Although the landscape may be clearer if other cases, *e.g.*, the judgement of 1703 survived, it is reasonable to believe that confusion were seemingly uncommon and prohibitions were not made reluctantly, especially if we take into account the fact that the Kiangnan textile industry only recovered its order from the dynastic dislocations and disastrous wars several years earlier before 1659.¹⁰³

More importantly, it is also clear that legal protections closely followed social demand¹⁰⁴ such as trademark registration, which is deemed to be a result of significant commercial expansion. The proposal of registration reflected in the 1736 case is supported by evidence that the Constitution of Shanghai Textile Industry Association of 1825 formulated a systematic *pailü* (Trademark Regulation), which provided clearly workable procedures including the registration and approval of trademarks, trademark transfer, license agreement, the rights of trademark-originators, and penalty clauses. This Regulation was also supplemented with a well-organized registration book (*paipu*), in which various forms of confusion were explicitly pointed out and strictly prohibited.¹⁰⁵

Similar judgements were available in other industries. In 1830, Xie Fu-chun, a Jiangsu cosmetic manufacturer producing a unique cosmetic powder under a trademark of five bamboo buckets sued thirteen counterfeiters to the Imperial Supreme Court. The defendants were punished and the judgements were pasted on the doors of those shops to inform the public.¹⁰⁶ Four steles housed in Suzhou Museum recorded the local judgements prohibiting the use of a false trademark on a very famous cough syrup invented by Ge Yu-qing Tang in the eighteenth century. The judgements articulated that '[the said trademark confusion] has resulted in serious damages to the health of the patients and consequently the business and reputation of Ge Yu-qing Tang because victims always come to Ge Yu-qing Tang to claim compensation.' The illegal trademark user was then punished with his shop

¹⁰³ *Huang Qing zouyi* (Memorials of the Qing), vol. 2. Cited from Liu, *History of China's Industry*, p. 494.

¹⁰⁴ For cases in England, see Schechter, *The Historical Foundations*, p. 101; Keith M. Stolte, 'How Early Did Anglo-American Trademark Law Begin? An Answer to Schechter's Conundrum', 8 *Fordham Intell. Prop. Media & Ent. L. J.* 505 (1997-98), pp. 540-44. For cases in other European countries, see Rogers, 'Some Historical Matter', p. 33. For situation in Islamic countries, see Amir H. Khoury, 'Ancient and Islamic Sources of Intellectual Property Protection in the Middle East', 43 *IDEA* 151 (2003), pp. 172-75.

¹⁰⁵ Zuo Xu-chu, *Zhongguo jindai shangbiao jianshi* (*A Brief History of Modern China's Trade Mark*), Shanghai: xuelin, 2003, pp. 122-23.

¹⁰⁶ Zuo, *A Brief History of Modern China's Trade Mark*, p. 124.

sealed off.¹⁰⁷ Trademark conception was also firmly established in jewellery trading¹⁰⁸ largely due to the extremely precious nature of the products. As the Jewellery Association of Suzhou articulated in Article Three of its 1906 Regulation, ‘selling fake products and/or confusing trademarks are the most serious thing that damages our reputation and business. If anyone dares to do so, relevant penalties will be applied and in serious cases he will be prosecuted.’¹⁰⁹

Due to various reasons, historical data relating to traditional China’s trademark are scarce.¹¹⁰ However, the information mirrored here sufficiently makes us rethink the conventional view arguing that the whole empire except someone who put their ante in business was totally indifferent to the important and various functions of trademarks.¹¹¹

6.3. Trademark’s social function: protecting the customers

In addition to the function of protecting trademark rights, trademark has another fundamental function of protecting the customers. Here the customers do not necessarily need to enjoy the new knowledge created by trademarks; their interests are sufficiently protected if a trademark genuinely identifies its true source of origin. A free and competitive market is also important because it excludes monopoly and eventually benefits the public. Trademark’s social function is deemed to take place even earlier than the concept of trademark rights,¹¹² and can be reflected in the above mentioned cases.

In Europe there was a public policy that a man should not develop a trademark as a guarantee of the quality of his merchandise and then sell or farm out the use of that mark apart from his business to those who may sell a vastly inferior product under his mark.¹¹³ As a matter of fact, throughout Europe numerous marks of control or guarantee were affixed by local authorities to certify that the goods bearing them were of prescribed

¹⁰⁷ For a brief introduction, see Zhu, ‘Pharmacy Stone Inscription of Suzhou’, p. 132.

¹⁰⁸ Duan & Zhang, *History of Suzhou’s Handicraft Industry*, p. 83. I have a personal collection dating back to the late 19th century with trademark clearly and beautifully indicated.

¹⁰⁹ *Collection of Suzhou’s Industrial and Commercial Epigraphs in the Ming and Qing Dynasty*, p. 175.

¹¹⁰ Evidence must have existed somewhere else. For instance, Alford mentioned that some sericulturists whose ‘trade-marked’ silk in Shanghai area had been improperly copied were able in 1856 to seek the assistance of their district magistrates, who ordered the infringers to stop. Alford, *To Steal a Book*, p. 16. Cited from Gary Hamilton and Lai Zhi-gong, ‘Jingshi Zhongguo shangbiao yu quanguo dushi shichang (Trademarks and the National Urban Market in Late Imperial China)’, in *Proceedings of the Conference on Regional Studies of Modern China*, Taipei: Academia Sinica, 1986, pp. 4-15.

¹¹¹ Alford, ‘Don’t Stop Thinking About ...Yesterday’, p. 20.

¹¹² Schechter, *The Historical Foundations*, p. x.

¹¹³ Schechter, ‘The Rational Basis of Trademark Protection’, p. 822.

standards of size, weight, price or quality.¹¹⁴ This indicates a strong desire to protect the public interest by using trademarks to monitor quality. Thus we would not be surprised that violators were punished heavily and in some extreme cases by wearing the pillory, being sent to the galleys, having the right hand cut off,¹¹⁵ and even sentenced to death.¹¹⁶

In China, regulations protecting consumers emerged in antiquity. As the authoritative *Zhou Li* (Rites of the Zhou dynasty, eleventh century-770BC) provided, poor quality must be strictly avoided before they could be sold on the market. Detailed standards were established. For instance, utensils and apparatuses had to accord with the relevant manufacturing models, cloths had to meet the prescribed width and quality, and colours had to be pure. A contemporaneous book *Kao gong ji* also provided similar criteria such as potteries shall not enter the market if they are damaged.¹¹⁷

Feasible regulations were applied to implement the above laws. Goods bearing the same name but different value were separated to a great distance so as to make them easily distinguished. Inspectors were sent to every twenty shops for the prohibition of false goods and the prevention of deceitful methods. If there was any misrepresentation, the seller would be punished by officers of the market who were in charge of the relevant disputes and litigations.¹¹⁸ More important measures refer to quality controls during manufacturing. *Kao gong ji* gives an example that during the manufacturing if a drinking vessel is tested to contain remnant drops when it touches the mouth from a certain angle, the worker will be punished by the director.¹¹⁹

Only by marks could these regulations be more executable. As recorded in *Lüshi Chunqiu*, a system of *wu le gong ming* (carving names on the products) was developed to give fair rewards and punishments.¹²⁰ Although in the state-owned workshop the names of the workers engraved on the products may have had no direct links with trademarks, such system developed to indicate also the names of workshops, which, as the above discussion suggests, may contain trademark functions provided that the products were sold as commodities.¹²¹ An example can be found on a Han steel sword which is marked: 'in 77, made by Wan Yin, the section chief of the West Workshop of Sichuan; this

¹¹⁴ Leon E. Daniels, 'Trade-Marks – Their Origin and Development,' 36 *T.M.R. Bull.* (1941), pp. 58-59.

¹¹⁵ Rogers, 'Some Historical Matter', p. 33.

¹¹⁶ Gerald Ruston, 'On the Origin of Trademarks', 45 *TMR* 127 (1955), p.141.

¹¹⁷ Wu, *History of Economic Thinking in Ancient China*, p.143; 152.

¹¹⁸ Chen Huan-Chang, *The Economic Principles of Confucius and His School*, Bristol: Thoemmes Press, 2002, p. 447.

¹¹⁹ Wu, *History of Economic Thinking in Ancient China*, p. 152.

¹²⁰ Yue Ling of *Lüshi Chunqiu*. Cited from Zhao & Chen, *History of China's Economic System*, p. 255.

¹²¹ See previous analysis of the iron products of the Han.

product is polished by fifty working procedures.’¹²² Such a model was also applied in privately-operated workshops but carved names mainly referred to the producers rather than their workers. A lacquer plate exhumed in North Korea was marked in detail as: ‘in 69, made by Mr. Lu under the supervision of the West Workshop of Sichuan; completed by double-ramie and triple painted; firm and good for your offspring; quantity: 1,200.’¹²³

There was a law of the Jin dynasty (265-420) preserved in the *Jin Lin* (Laws of the Jin) that expressly indicates the relationship between marks and the quality of the products. It reads:

Any one who prepares to make lacquer wares shall have their application approved by the government. Each product must be produced by cloths painted with pure lacquer. Upon the completion of the ware, dates and names of the producers must be inscribed.¹²⁴

These laws, not only customs, had never been stopped. The practice of the above-mentioned Jin law was referred to by the Song governmental documentations. In addition, it was articulated in a tenth-century decree: ‘Cloths, silks and other various coloured satins, whatever produced by the state-run workshops or the private ones, must follow the *traditional* laws, meeting the measures of widths and weights and making no falseness.’¹²⁵

The available legal documents of the industrially and commercially prospered Tang (618-907) and Song (960-1279) dynasties provide us with a clearer picture. It is noteworthy that the relevant laws reached a remarkable stage, aiming at feasible and fair protection for parties involved.¹²⁶ Commodities were classified in three categories according to their quality and the prices of the items in each category and were required to be recorded into account books every ten days.¹²⁷ The impressive market order that one of the greatest Tang poets, Liu Yu-xi (772-842), witnessed in Yuan-ling (a remote place in southeast China) in 807 well evidences the result of implementing those laws. He wrote: ‘goods are

¹²² Song, *Handicraft Industry of the Han Dynasty*, pp. 9-10.

¹²³ Liu, ‘Brief exploration on the history of China’s trademark and advertisement’, p. 10.

¹²⁴ *Jin Ling*, cited by *Taiping yulan* (Encyclopaedia of the Song), vol. 758. Cited from Zhu, *History of Traditional China’s Industry*, p. 340.

¹²⁵ *Jiu Wudai shi* (Old History of Five Dynasties), vol. 116. Cited from Zhang, *Industry and Commerce in Tang Dynasty*, p. 98.

¹²⁶ For a brief introduction, see Zhang, *Industry and Commerce in Tang Dynasty*, pp. 132-36.

¹²⁷ Taketoshi Satō, ‘Tōdai no shisei to kō – toku ni Chōan o chūshin to shite (The Market System and the Guild of the Tang Dynasty –with Special Emphasis on Chang’an)’, XXV *Tōyōshi kenkyū* (1966), pp. 275-302. Cited from Ma, *Commercial Development and Urban Change in Sung China*, p. 77.

classified and clearly labelled with price before display, among which various foreign products exhibit.’¹²⁸

Punishments for violating quality control standards were expressly prescribed in the *Tanglü shuyi* (The far-reaching meanings of the Tang penal codex), which reads: ‘anyone who falsely makes and sells disqualified utensils, appliances, silk and cloths will be flogged sixty strokes.’¹²⁹ A decree appeared in 707 also provided that ‘goods with poor qualities will be confiscated.’ It is noteworthy that selling false and disqualified goods with substantial profits were treated by the Tang Code as *larceny*.¹³⁰

It seems that using marks was the most workable measure to prevent falseness (*lan*), which was clearly defined as the behaviour that ‘intended to gain profit by selling similar and confusing goods with inferior qualities’.¹³¹ Evidence can be seen in the *Tang liu dian* (Compendium of administrative law of the six divisions of the Tang bureaucracy), which provides: ‘bows, arrows and long swords must follow the official measures and be marked with the names of the workers before being sold in the market. Other products shall, also follow the same regulation. [Otherwise,] [F]alse and confusing products will be confiscated; silk and cloth that are short in length or narrow in width will be returned to the sellers.’¹³²

The Song inherited most of the Tang laws, although significant reformative improvements took place on various aspects. As for quality control, the *Song xing tong* (Song Criminal Code) provided an almost identical article as indicated in the *Tanglü shuyi*.¹³³ It seems that the governments were very serious about quality control; as a decree in 967 reiterated, ‘the laws on disqualified and confusing goods are so unambiguous that violation will be punished heavily.’¹³⁴ It is of no doubt that the implementation of these laws depended on marks. As the *Song Shi* (History of the Song) recorded, ‘products must

¹²⁸ Zhang, *Industry and Commerce in Tang Dynasty*, p. 254.

¹²⁹ Zalü, *Tanglü shuyi*, vol. 26. Cited from Xu Dong-sheng, ‘Tangdai fangshi zhi yu gongshangye (District Separation of Residence and Commerce and the Industry and Commerce of the Tang)’, 3 *Fujian luntan* (*Fukien Academic Forum*) 84 (2000), p. 85. Also see Wei Tian-an, *Songdai Hanghui zhidu shi* (*History of the Guild System of the Song*), Beijing: Dongfang, 1997, p. 120.

¹³⁰ *Tanglü shuyi*, vol. 26. Also see *Song xing tong*, vol. 26. Cited from Wei, *History of the Guild System of the Song*, pp. 120-24.

¹³¹ *Tang huiyao* (Institutional History of Tang Dynasty), vol. 86. Cited from Zhang, *Industry and Commerce in Tang Dynasty*, p. 348.

¹³² *Tang liudian*, vol. 20. Cited from Zhang, *Industry and Commerce in Tang Dynasty*, p. 209.

¹³³ *Song xing tong*, vol. 26. Cited from Wei, *History of the Guild System of the Song*, pp. 120-24.

¹³⁴ *Song da zhaoling ji* (Collections of the Song Decrees), vol. 198. Cited from Wei, *History of the Guild System of the Song*, p. 124.

be inscribed with the names of the artisans who made them; fine and inferior qualities will be regulated by established models.’¹³⁵

A long tradition of implementing these laws may also explain that a clear concept of honesty and goodwill was deeply rooted in the commercial and industrial fields. A famous merchant Zhu Wen-zhi’s practice was typical: a tea seller in Guangdong, he never forgot to write *chen-cha* (old tea) on every contract if the tea was out of season.¹³⁶ The firmest loyalty to those credos probably lies in doctors and pharmacists. The *jie-qi bian* (No Deceit Plaque) hung on the Hu Qing-yu Tang (Celebrating Opulence Pharmacy Shop of the Hu), which was established in 1874 by the Kiangnan pharmacal king, Hu Xue-yan (1823-1885), and is still in operation, reads as follows: ‘no trade shall be tainted with the word deceit; at no time shall the pharmacy industry cheat, as medicine is an issue of life and death; I genuinely devoted myself to promote the public interest and I swear that I will never grab big profit by selling inferior products.’¹³⁷ There were also regulations of trade associations articulating the same goals. The tone that the Regulation of Suzhou Pharmacy Association of the Qing applied is common both for its contents and its logic: ‘we gather our colleagues in this Association to promote the profound Tao of making herbs and processing medicine. We thus agree that no carelessness and deceit to our hearts shall occur and we will not make false medicine to imbrue the sin. We devote our hearts and vigour to utilize the materials and benefit the people.’¹³⁸

The liveliest scenes are those imprinted in the commercial encyclopaedias which indefatigably gave emphasis to the importance of quality and honesty. As the most popular encyclopaedias, *Shanggu bianlan* (Convenient Handbook for Merchants), articulated, ‘profits will automatically arrive only if the customers are fairly and reasonably treated...; goods must be genuine and price must be fair, which means profits shall only be gained by righteousness and our customers will then be convinced.’¹³⁹ Books with the same sentiments flourished everywhere in the Ming (1368-1644) and

¹³⁵ *Song shi* (History of the Song), vol. 165. Cited from Liu, *History of China’s Industry*, p. 338; Ma, *Commercial Development and Urban Change in Sung China*, p. 77.

¹³⁶ *Wuyuan xianzhi* (County gazette of Wuyuan), vol. 33, Guangxu reign (1875-1909). Cited from Zhao Yi and Zhang Ming-fu, ‘Chuantong wenhua yu Ming Qing shangren de jingying zhi dao (Traditional Morality and the Commercial Credos of the Ming and Qing Merchants)’, 1 *Journal of Northeast Normal University* 27 (1998), p. 107.

¹³⁷ Chen, ‘Famous and Old Pharmacies of the Qing’, p. 242.

¹³⁸ Zhu Wei-jun, ‘Qingdai Suzhou yaoye bei qianxi (A Brief Introduction of the Pharmacy Stone Inscription of Suzhou of the Qing)’, 3 *Journal of Suzhou University* 131 (1997), p. 133.

¹³⁹ Wu Zhong-fu, *Shanggu bianlan*. Cited from Chen, ‘Trend of the Business Ethics of the Ming and Qing Merchants’, p. 16.

Qing (1644-1912) probably as a result of expanded trans-regional exchanges of goods across the immense territory,¹⁴⁰ making quality a more important issue.

The tones applied to praise the honest merchants and manufacturers or to insinuate the rewards for virtue were always linked to trademarks. As revealed in a local record, ‘in the places where Mr. Lu, the owner of Bao-he Tang (Protecting-peace Pharmacy), could not arrive, his Bao-he Tang medicine arrives.’ Another record articulated more clearly: ‘Wu Nan-po has never deceived even a kid...He is thus reputed everywhere, resulting in a fact that he has won many customers who only look at his trademark and never actually check the quality.’¹⁴¹ It seems that laws and credos created a platform on which both the industrial and commercial realm and the public established a relatively harmonized or balanced relationship, which would only be reached when trademarks were in operation.

Balance could not be achieved if the whole market where trademarks actively cruised was strongly monopolised by a small group of people. As Chapter Five has suggested, monopoly, albeit existing, was disfavoured by the Chinese. The existence of a united giant market and the freedom of a high population shift across the whole Chinese empire made it difficult and unreasonable to maintain strong power of repulsion,¹⁴² a phenomenon contrary to mediaeval Europe where feudal systems favored a limited and territorial development of trade, making guilds capable of enforcing a rigid monopoly by using their marks.¹⁴³

This may explain that, unlike Europe where the exploitation of marks to the direct individual advantage or for the personal advertisement was strongly discouraged,¹⁴⁴ individual advertisements containing evident flavor of self-promotion thrived in China.¹⁴⁵ A reasonable consequence thus would be that trademarks were often applied as

¹⁴⁰ For a brief introduction of the phenomenon of commercial encyclopaedias, see Li Lin-Qi, ‘cong pudie he shangye shu kan Ming Qing Hui Zhou de shangye jiaoyu (Commercial Education as Reflected in the Ming and Qing Stemmata and Commercial Encyclopaedias)’, *Zhongguo wenhua yanjiu (Chinese Culture Studies)* (Autumn 1998), p. 48. Many records on merchant activities survived. For instance, see *Ming Qing Hui shang ziliao xuanbian* (Collected Materials of the Hui Zhou Merchants in the Ming and the Qing). For a brief introduction, see Zhao & Zhang, ‘Traditional Morality and the Commercial Credos of the Ming and Qing Merchants’, pp. 28-29. Zhang ming-fu, ‘Ming Qing Huizhou shangren de jingshang zhi dao (Commercial Strategies of the Huizhou Merchants in the Ming and Qing)’, 2 *Journal of Southwest Normal University* 105 (1995), p. 107.

¹⁴¹ *Ming Qing Hui shang ziliao xuanbian*, No. 625, 886. Cited from Zhang, ‘Commercial Strategies of the Huizhou Merchants in the Ming and Qing’, pp. 106-07.

¹⁴² Zhao & Chen, *History of China's Economic System*, p. 320.

¹⁴³ Schechter, *The Historical Foundations*, p. 47. Also see Spyros Maniatis, ‘Distinctive Signs and Early Markets: Europe, Africa and Islam’, in *Perspective on Intellectual Property: The Prehistory and Development of Intellectual Property Systems*, Alison Firth ed., Sweet & Maxwell 1997, p. 139; Diamond, ‘The Historical Development of Trademarks’, p. 277.

¹⁴⁴ Schechter, *The Historical Foundations*, p. 47.

¹⁴⁵ See the previous discussion for details.

instruments of boosting competition. Xu Zhong-Yuan recorded at the turn of the seventeenth-eighteenth century a successful story of doing business as follows: ‘Mr. Wang of Xin-an who established his trade name *Yi-mei* (beauty-increasing) in Suzhou strategized about money-making by secretly paying slightly more wages to the weavers provided that they sewed his mark on the cloths. Weavers thus all eulogized that the cloths of *Yi-mei* were really nice and beautiful, resulting in aggressive selling of over a million per year.’¹⁴⁶ This strategy may also explain why *Yi-mei* was once one of the most successful textile manufacturers of the Qing.¹⁴⁷

6.4. Conclusions

In China, trademark notions and practices emerged and developed in tune with the evolution of commodity economy since antiquity. Trademark regulations and legal protections became more popular when embryonic capitalism grew in leading industries from the first half of the sixteenth century. In addition to the function of protecting trademark owners’ rights, trademark also carried out a fundamental function of protecting the customers.

The development of trademark in China reflects the role of the inherent nature of intangible knowledge in determining the necessity of attracting legal protection. However, fundamentally different from other forms of intellectual property such as copyright and patent, trademark does not serve the goal of producing more knowledge. The interests of trademark owners as well as the public interest are not essentially associated with the dissemination of knowledge itself but are ensured by the genuine identification of goods. The function of genuine identification reflects another fundamental character of trademark, *i.e.*, trademark cannot be protected by models other than exclusive rights since such function immediately disappears when a trademark is out of the control of its owner. As a matter of fact, absolute exclusive rights are essential to the protection of both trademark owner’s rights and the public interest. On the contrary, strong exclusives rights associated with books and inventions often hinder the public interest.

¹⁴⁶ Xu Zhong-yuan, *sanyi bitan*, vol. 3. Cited from Xie Guo-zhen (ed.), *Mingdai shehui jingji shiliao xuanbian* (*Selections of the Economic Historical Materials of the Ming*), vol. 2, Fuzhou: Fujian renmin, 1980-81, pp. 97-98.

¹⁴⁷ Li Bo-zhong, ‘Gongye fazhan yu chengshi bianhua: Ming zhongye zhi Qing zhongye de Suzhou (Industry Development and Urban Changes: Suzhou from the Mid-Ming to Mid-Qing)’, 1 *Qingshi yanjiu* (*Studies of Qing History*) (2002), p. 56.

As the rest of this research will suggest, the differences between trademark and other forms of intellectual property are essentially constructive to the re-consideration of intellectual property theories: whether the improvement of the public interest in using knowledge fundamentally depends on knowledge dissemination ultimately determines how intellectual property is designed, justified and protected.

CHAPTER SEVEN

Looking into the Historical Mirror: Lockean Intellectual Property Theory and its Historical Limitations

*If a loss of social progress is the price
that must be paid for upholding rights
then so be it.*

– A contemporary Lockean scholar Adam D. Moore.¹

The previous chapters made a comparative historical journey during which pre-modern China had been a main focus. In both China and Europe, the emergence of intellectual property should not be understood as self-evident; nor should it only be justified by examining the inherent nature of intangible knowledge. When putting intellectual property in a broader social context, we can argue that intellectual property and the stimulation of new knowledge fundamentally serve the purpose of improving the public interest in using knowledge. A very noteworthy phenomenon is that whether the improvement of the public interest in using knowledge fundamentally depends on knowledge dissemination ultimately determines how intellectual property is designed, justified and protected. This can be well reflected by today's fierce debates on the imbalance between copyright and patent owners and the public discussed in Chapter One.

To what extent does Lockean intellectual property theory support the public interest? As will be suggested below, the historical background of Lockean theory makes it mainly focus on the notion of property and fail to deeply contemplate the much broader social context in which not only intellectual property but also the public interest in using knowledge occur. Lockean theory is often used together with the incentive theory, which, too, inclines to positively theorize the propertization of knowledge and relatively neglect an equal philosophical foundation of the public interest.

7.1. Lockean theory of property and its historical context

Every scholar will find it extremely difficult, if not entirely impossible, to comprehend the evolution of modern intellectual property laws and theories without a full grasp of the property theory provided by the great English philosopher John Locke (1632-1704).

¹ Adam D. Moore, 'A Lockean Theory of Intellectual Property', 21 *Hamline L. Rev.* 65 (1997), p. 99.

Locke's property theory argues that each individual has the rights to protect his own body and belongings; these rights are natural rights and cannot be deprived unjustly by any political power or legal institution. Locke starts to justify these natural rights by empirically describing a primitive state, in which abundant natural resources are granted by God. To enable mankind to enjoy these resources, every individual must use her own labour to acquire private possession of her labour's results -- the resources taken from Nature. In his immortal masterpiece *Two Treatises on Government*, Locke articulates:

Though the Earth, and all inferior Creatures be common to all Men, yet every Man has a Property in his own Person... Whatsoever, then, he removes out of the State that Nature hath provided, and left it in, he hath mixed his Labour with, and joyned to it something that is his own, and thereby makes it his Property... For this Labour being the unquestionable Property of the Labourer, no Man but he can have a right to what that is once joyned to, at least where there is enough, and as good left in common for others.²

Locke's theory of natural property rights *de facto* reflects his awareness that every individual will not securely survive unless an order is set to allow her to possess resources that shall be obtained by proper manner such as diligent working. Locke's logic of justifying the way of survival is quite clear and eloquent. As Adam Moore puts it, assuming that every individual exclusively owns her body and labour, once her labour is joined with an unowned object, consequently property rights are generated.³

At the same time, Locke clearly realizes that the moral justification of property rights cannot avoid certain restrictions. A crucial issue is the degree to which labour-based propertization can be justified. Locke's solution is to limit propertization, which is known as the 'Lockean Proviso'. First, property acquired by an individual's labour must satisfy the *enough and as good* condition, which means unless there are enough and as good left for others an individual's propertization cannot be justified.⁴ Under the *enough and as good* condition, some resources such as rivers, roads and forests should be left in common in that these resources are scarce and need to be shared by the whole society. Second, Locke sets up a *non-waste* condition, which prohibits the accumulation of so

² John Locke, 'Second Treatise of Government', in *Two Treatises of Government*, ed. by Peter Laslett, Cambridge: Cambridge University Press, 1988, p. 27.

³ Adam D. Moore, *Intellectual Property and Information Control: Philosophic Foundations and Contemporary Issues*, New Brunswick, N.J.: Transaction Publishers, 2001, p. 71.

⁴ Locke, 'Second Treatise of Government', § 27, in *Two Treatises of Government*. Cited from Justin Hughes, 'The Philosophy of Intellectual Property', 77 *Geo. L.J.* 287 (1988), pp. 299-300.

much property that some is destroyed without being used.⁵ It seems that by proposing the Lockean Proviso Locke tries to demonstrate that propertization needs not conflict with a broader scope of public interest and social justice.⁶

However, Locke takes a very individualistic approach to construe the Lockean Proviso. The moral restrictions that Locke sets for appropriation serve his ultimate purpose of justifying the latter. It is noteworthy that the Lockean Proviso is not easy to be broken because Locke initially hypothesizes that in the primitive state there are enough unclaimed goods so that everyone can appropriate the objects of her labour without infringing upon goods that have been appropriated by someone else.⁷ Once the Lockean Proviso is satisfied, which is not difficult under Locke's logic, as Justin Hughes puts it, there are *no* good reasons for not granting property rights in possessions.⁸ Therefore, the Lockean Proviso is largely defensive and a 'second-in-time concern' while his natural property rights incline to be absolute, sacred and expanding rather than comfortably negotiable or willing to be tightly restricted.⁹ As Robert Nozick points out, although Locke tries to find a point to reconcile a robust common with strong private property rights, his property rights swallow the common resources.¹⁰

A giant of his time, Locke deliberately weaves his theory under the historical context of the Zeitgeist of seventeenth-century England. Locke's passion and inspiration of writing the *Two Treatises on Government* is not simply an outcome of his pursuit of morality and social justice, but also a direct result of his disagreement with the 'Divine Right' argument proposed by Sir Robert Filmer (1588-1653) who maintains that God gave the world to Adam -- an argument that was ultimately used to support the unlimited authority of monarchs.¹¹ For Locke, it was urgent to provide a powerful theory to prevent the individual rights from being jeopardized by the Crown's power, which was under crisis at Locke's time. The underpinning of Locke's property theory is manifest: to fight against

⁵ Locke, 'Second Treatise of Government', § 37, *ibid.*

⁶ Locke, 'Second Treatise of Government', § 37, *ibid.*

⁷ Locke, 'Second Treatise of Government', § 33, *ibid.*

⁸ Hughes, 'The Philosophy of Intellectual Property', p. 298.

⁹ Steven Wilf, 'Who Authors Trademarks?', 17 *Cardozo Arts & Ent LJ* 1 (1999), p. 4.

¹⁰ Robert Nozick, *Anarchy, State, and Utopia*, New York: Basic Books, 1974, pp. 174-78.

¹¹ Robert Filmer, *Patriarcha, or the Natural Power of Kings*, London: Walter Davis, 1680. Locke, *Two Treatises of Government*. Carys J. Craig, 'Locke, Labour and Limiting the Author's Right: A Warning Against a Lockean Approach to Copyright Law', 28 *Queen's L.J.* 1 (2002), p. 49. For a brief analysis of Locke's intention of defending property against Filmer, see Tom G. Palmer, 'Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects', in *Copy fights: the future of intellectual property in the information age*, ed. by Adam Thierer and Wayne Crews, Washington, D.C.: Cato Institute, 2002, pp. 55-56.

the danger of autarchy, every individual's life and property must be securely guaranteed.¹²

Why did Locke ground his logic on individual-based natural rights? According to the environmentalist Myrl Duncan, Locke's individualism is a product of the seventeenth-century scientific revolution based on Newtonian atomistic physics, which views the universe as being formed by individual atoms. When scientific research enters the epoch of holism, the individual-based approaches have been increasingly challenged by the community-based approaches.¹³ It seems to be difficult to say that every detail of Locke's individualistic approach is properly demanded by justice. For instance, it is not unreasonable to argue that community-based approaches such as those proposed by Ronald Dworkin and Alasdair MacIntyre may be more capable of improving social welfare and therefore more consonant with justice.¹⁴

In sum, born in the unprecedented social and intellectual revolution of seventeenth-eighteenth century Europe, Locke's theory begins from and concentrates on appropriation. It is rather a great pioneer of modernity than an absolute and unchangeable truth. Contextualizing the historical background of Locke's property theory does not detract from Locke's status as one of the greatest thinkers in history. It is hypercritical to expect every theory to be perpetually sound. To borrow the noted postcolonial researcher Edward Said's argument, no production of knowledge in the human sciences can ever ignore or disclaim the author's involvement as a human subject in his own circumstance.¹⁵

7.2. The eighteenth-century British publishing monopoly and the transplant of Lockean theory

One may be surprised that Locke himself may never have come across any idea about intellectual property.¹⁶ As far as intellectual property is concerned, we should turn to

¹² Locke, *Two Treatises of Government*, I 1-3.

¹³ Myrl L. Duncan, 'Property as a Public Conversation, Not A Lockean Soliloquy: A Role for Intellectual and Legal History in Takings Analysis', 26 *Envtl. L.* 1095 (1996), pp. 1099-1127.

¹⁴ Dworkin suggests that equality must be enjoyed by community members. Ronald Dworkin, *Sovereign Virtue: The Theory and Practice of Equality*, Cambridge, MA: Harvard University Press, 2000. In his highly regarded book *After Virtue*, MacIntyre emphasizes the role of virtue and community and criticizes individualism. Alasdair MacIntyre, *After Virtue*, Notre Dame: University of Notre Dame Press, 1984.

¹⁵ Said's view is sufficiently reflected in his *Orientalism*. Edward Said, *Orientalism*, London: Penguin, 2003. Simon Leys, *The Burning Forest: Essays on Chinese Culture and Politics*, London: Paladin Grafton Books, 1988, p. 96.

¹⁶ Mark Rose, *Authors and Owners: The Invention of Copyright*, London: Harvard University Press, 1993, p. 33.

examine the roles of the eighteenth-century London booksellers who grafted Lockean theory onto the inevitable and complex debates encountered by the British publishing industry of early modern times. Those absolute and sacred flavours permeating Lockean theory have since then been deposited on the theoretical foundations of today's intellectual property edifice. For London booksellers, the above-discussed unprecedented historical context of Lockean theory was difficult to detect; they only had one immediate demand of maintaining their monopoly power.

As the previous chapters have mentioned, one of the most notable characteristic of Western European intellectual property history is that since the middle of the sixteenth century, the evolution of copyright practice had become less associated with the commercialization of books. Quite ironically, the purpose of reinforcing monarchic and religious power resulted in the pre-publishing censorship being employed to an extreme end. This tide sprouted first in England. In 1557, the English king established London Stationers' Company.¹⁷ The Royal Charter granted to the Company articulated the most distinguished character of this printing guild: no person within the realm of England shall practice printing unless that person is 'a member of the community of the aforementioned art or mystery of Stationery.'¹⁸ This certainly banned the printing outside London, and printing on ancient books was solely allotted within the Members.¹⁹ One of its obvious outcomes was that over two or three generations dozens of valuable copies were being concentrated in a few firms, and by 1640, the copy-owners became the leaders of the book trade.²⁰ The French approach was more rigorous. Since 1686, Louis XIV fixed the number of the Paris printers at thirty-six. Successful entry into the guild required an apprenticeship and examination by both guild masters and Paris University.²¹ The English and French practice of publishing censorship indicates a unique phenomenon of sixteenth to eighteenth century Western Europe -- the printing guilds had absolutely monopolistic power and they were unwilling to lose it.²²

Since the end of the seventeenth century, repeatedly the voice of anti-monopoly began to emerge. As many scholars have pointed out, the animosity against publishing monopoly

¹⁷ John Feather, *A History of British Publishing*, London: Routledge, 1988, p. 18. Joseph Loewenstein, *The Author's Due: Printing and the Prehistory of Copyright*, Chicago: The University of Chicago Press, 2002, pp. 13-14.

¹⁸ Loewenstein, *The Author's Due*, p. 53. Rose, *Authors and Owners*, pp. 11-12.

¹⁹ Feather, *A History of British Publishing*, p. 17; 41.

²⁰ Feather, *A History of British Publishing*, pp. 41-42. John Feather, *Publishing, Piracy and Politics: An Historical Study of Copyright in Britain*, London: Mansell, 1994, p. 20. Lyman Ray Patterson, *Copyright in Historical Perspective*, Nashville: Vanderbilt University Press, 1968, p. 47.

²¹ For details, see Carla Hesse, *Publishing and Cultural Politics in Revolutionary Paris, 1789-1810*, California: University of California Press, 1991, pp. 8-17.

²² This phenomenon did not exist in pre-modern China. See Chapter Five for details.

is not a result of the rise of the romantic notion of authorship, which identifies the author as an independent and single source of creativity,²³ or the recognition of copyright as a form of individual rights.²⁴ Rather, it is largely a direct consequence of British Parliament's need to restrict the power of the Crown. Publishing was seen as a vital propaganda instrument in determining the outcome of battle against the monarch.²⁵

In 1694, the old system of London publishing monopoly represented by the Licensing Act eventually collapsed, resulting in anarchy in the publishing industry. Parliament found that the abolition of the old Act simply did not work and a new system became a must. The publishers and booksellers launched petitions repeatedly; the themes that ran through all of the petitions were to restore the old Act. However, the House of Commons had a different idea: it wanted to control the publishing industry as well as to prevent the restoration of the old system.²⁶

The publishing industry realized that the hope of keeping their interests was to establish a sound theory, which could firmly support their petitions. It is noteworthy that prior to the first copyright act, the Statute of Anne of 1710, the London publishing industry had gradually developed a practice, by which, as the noted scholar John Feather pointed out, copies were sold and inherited within its members as tangible properties with a strict forbiddance on outflow.²⁷ It is then quite easy for the publishers and booksellers to be inspired to use theories of tangible property to justify their monopoly power. As a matter of fact, before the early eighteenth century, the most familiar metaphor about an author's relationship to his writings was paternity while an alternative one, as the noted English writer and politician Joseph Addison (1672-1719) purported, was landed estate.²⁸

Since the early eighteenth century, the representation of the author as proprietor has largely been dependent on the classical liberal discourse of property represented, most famously, by John Locke's statement of natural rights.²⁹ Two arguments were easily established under Locke's reasoning: first, literary works are the fruits of authors' labour;

²³ Please see Chapter Eight for more details.

²⁴ It is noteworthy that, as Mark Rose argues, granting a printing privilege by the Crown, either to a guildsman or an author, was largely a *reward* rather than 'property'. Rose, *Authors and Owner*, pp. 16-17. What the Stationers had was only *privilege* from the Crown's grace, not property right. Rose, *Authors and Owners*, pp. 23-25. The French king repeatedly affirmed this. The privilege, as declared once again in the 1777 French decrees, is not a property right, but 'a grace founded in Justice'. Hesse, *Publishing and Cultural Politics in Revolutionary Paris*, p. 20.

²⁵ For instance, see Loewenstein, *The Author's Due*, pp. 122-23; Feather, *Publishing, Piracy and Politics*, p. 40.

²⁶ Feather, *Publishing, Piracy and Politics*, pp. 50-56.

²⁷ *Ibid.*, p. 18; p. 25.

²⁸ Rose, *Authors and Owners*, p. 41.

²⁹ *Ibid.*, p. 41.

second, authors must enjoy their rights over the fruits of their labour. In theory, the property rights of the literary works should belong to their authors rather than the publishers. In practice, however, the publishers did not worry about this theoretical problem. As the 1707 petition presented, the property right of the author or the purchaser of an author's copy should be secured. The latter would mostly be the publisher.³⁰ Once the authors sold their copyrights to the publishers, the latter would enjoy their dreamed profits.

An active opponent of London publishers' obstruction to learning,³¹ Locke would have been irritated if he knew that the petitioners only selectively used his natural rights arguments, leaving his Lockean Proviso untouched. In 1710, a draft of the Statute of Anne presented by Edward Wortley, a close friend of Addison, insisted on an undoubted property right and said nothing about necessary restrictions.³² The publishers actively promoted this petition. But eventually the traditional character of the stationers' copyright was radically altered by the introduction of a limited term in the House of Commons. Parliament, which disfavoured monopoly, was also inspired by the publishers' use of Locke's property theory -- if Locke is right, then limitations must be posited to property rights.³³ The particular historical background of the early eighteenth century England then made Locke's property theory a winning bidder of our modern understanding of intellectual property.

Although the arguments of property rights were heavily used, the Statute of Anne did not settle the theoretical questions behind the notion of literary property. At the early stage of the application of the Statute of Anne, the London publishers' existing monopoly interests were not significantly threatened in that the majority of the English authors were happy to sell their works to those publishers who dominated the market and could bring to authors more profits. However, during the 1730s, when the limited period set by the Statute of Anne was about to expire, the development of reprinting outside London, which had easier access to the rapidly developed provincial markets and could offer cheaper products, rose as a danger to the London publishers.³⁴ To firmly maintain their interests, the London publishers tried to seek possibilities to justify their long-term interests under

³⁰ Feather, *Publishing, Piracy and Politics*, p. 56.

³¹ As Locke wrote in the end of the seventeenth century in the *Memorandum* (208-209), 'That any person or company should have patents for the sole printing of *ancient* authors is very unreasonable and injurious to learning'. Cited from Rose, *Authors and Owners*, p. 44.

³² Rose, *Authors and Owners*, pp. 42-43.

³³ *Ibid.*, p. 44.

³⁴ Feather, *A History of British Publishing*, pp. P77-78.

common law.³⁵ In 1769, Lord Mansfield, who is generally considered the single most influential English jurist of the eighteenth century, ruled in *Millar v. Taylor* (1769)³⁶ that authors had property rights based on common law. In this case, Locke's labour theory of property rights, which was used to support strong property copyright rights, clearly influenced the majority of the judges.³⁷ The influence was so powerful that Lord Mansfield considered mainly the fundamental principle of legal theory, especially the theory of property: because right in copies is a form of property, it, as all other properties, should exist for ever; limitations to property rights cannot be established from the perspective of limited period.³⁸

Several years later, in the debate over *Donaldson v. Becket* (1774),³⁹ a Scottish bookseller, Donaldson, began to challenge the London monopolists. The House of Lords, which had long been antipathetic to London booksellers' monopolies, decided that copyright must be limited by term. However, the argument was not about whether intellectual works were property in that using Lockean property theory to analyze intellectual works had so far been deeply rooted in the relevant discourses. For example, even though the majority of the judges in *Donaldson* agreed that, as to published works covered by the Statute of Anne, Parliament's approach must be respected, they were nonetheless firm of the view that the act of creation endowed creators with a natural right to exclusive possession of the intangible product of their minds.⁴⁰

The evolution of French intellectual property theory was initially influenced by England rather than by the romantic understanding of the Enlightenment. In 1726, the Paris printers' guild commissioned a jurist to write a legal brief invoking Locke's labour theory, arguing that the privileges were the legal confirmation of a pre-existing property right founded in the author's labour and transmitted to the publisher through a contract, albeit most of the authors were long since dead.⁴¹ The 1777 decrees, upon a 'labour rhetoric', created a *privilèges d'auteur*, which could be *perpetually* held by them and their heirs,

³⁵ Rose, *Authors and Owners*, p. 48.

³⁶ *Millar v. Taylor*, 98 Eng. Rep. 201 (K.B. 1769).

³⁷ Diane Leenheer Zimmerman, 'Information as Speech, Information as Goods: Some Thoughts on Marketplaces and the Bill of Rights', 33 *Wm and Mary L. Rev.* 665 (1992), p. 687.

³⁸ Rose, *Authors and Owners*, p. 84.

³⁹ *Donaldson v. Becket*, 17 Parl. Hist. Eng. 953 (1774).

⁴⁰ *Ibid.* There were opposite views. For instance, Judge Baron Eyre in the *Donaldson* case did not agree to define ideas as property. As he argued, the thinking faculty was a gift with which all men were endowed -- that ideas produced by the occupation of a thinking faculty common to all, should likewise be held in common, and no more be deemed subject to exclusive appropriation than any other of the common gifts of nature. Loewenstein, *The Author's Due*, p.18.

⁴¹ Roger Chartier, 'Figures of the Author', in *Of Authors and Origins: Essays on Copyright Law*, ed. by Brad Sherman & Alain Strowel, New York: Clarendon Press, 1994, p. 13; Hesse, *Publishing and Cultural Politics in Revolutionary Paris*, pp. 40-41.

unless sold to a third party.⁴² After the French Revolution, the new government did not immediately adopt the Lockean-style theory and the practice of copyright.⁴³ Copyright was abolished and it was not until the new government realized the danger of the chaos of free printing that it recreated a new copyright system based on the old practice.⁴⁴ In addition, during the Revolution a notion that an inventor has a natural property right in his invention was also advocated.⁴⁵

The Lockean justification of intellectual property crossed the Atlantic into the US and historically Lockean natural rights informed the Framers' understanding of intellectual property law.⁴⁶ The Congress was recommended to adopt copyright law on the ground that 'nothing is more properly a man's own than the fruit of his study'.⁴⁷ Meanwhile, various Lockean-style arguments rose to theorize intellectual property.⁴⁸ In the nineteenth century the US became a rampant and profitable pirate of English literary works,⁴⁹ Lockean argument was rejected by the courts.⁵⁰ But when its knowledge products began to expand rapidly, the US soon turned into a pioneer of safeguarding its own intellectual property rights.⁵¹

7.3. The effect of Lockean justification of intellectual property

Given the Lockean philosophy of natural property rights in general and the history of the grafting of Lockean theory by the English and French publishing industry in particular, we now turn to briefly examine the effect of the 'logic' of Lockean justification of intellectual property on the public interest issues.

⁴² Hesse, *Publishing and Cultural Politics in Revolutionary Paris*, p. 42.

⁴³ For further details, see Jane C. Ginsburg, 'A Tale of two copyright: literary property in revolutionary France and America', in *Of Authors and Origins*, pp. 131-58, p. 162.

⁴⁴ Hesse, *Publishing and Cultural Politics in Revolutionary Paris*, p. 42.

⁴⁵ M. Frumkin, 'The Origin of Patents', XXVII *JPOS* 143 (1945), p.148.

⁴⁶ Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), in *Basic Writings of Thomas Jefferson*, ed. by Philip S. Foner, New York: Willey book co., 1944, p. 708.

⁴⁷ Bruce W. Bugbee, *Genesis of American Patent and Copyright Law*, Washington: Public Affairs Press, 1967, p. 113. Similar statements by other lawmakers may be found throughout American history. William Fisher, 'The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States', in *Eigentum im internationalen Vergleich*, ed. by Vandenhoeck & Ruprecht, Göttingen: Vandenhoeck & Ruprecht, 1999, p. 278.

⁴⁸ For an introduction, see Palmer, 'Are Patents and Copyrights Morally Justified?', pp. 46-51.

⁴⁹ For two scholarly studies, see James J. Barnes, *Authors, Publishers and Politicians: The Quest for an Anglo-American Copyright Agreement 1815-1854*, London: Routledge & Kegan Paul, 1974; Meredith L. McGill, *American Literature and the Culture of Reprinting, 1834-1853*, Philadelphia: University of Pennsylvania Press, 2003. Also see B. Zorina Khan, 'Does Copyright Piracy Pay?: The Effects of U.S. International Copyright Laws on the Market for Books, 1079-1920', working paper 10271, National Bureau of Economic Research, January 2004, online at: www.nber.org/papers/w10271 (last visited 12th October 2006).

⁵⁰ McGill, *American Literature and the Culture of Reprinting, 1834-1853*, p. 45.

⁵¹ Zimmerman, 'Information as Speech, Information as Goods', pp. 690-703.

As has been demonstrated previously, despite the limitations placed by the Lockean Proviso, the essential character of Locke's property theory is that it inclines to support strong property rights rather than the public interest.⁵² Let us consider a Canadian government report on the revision of copyright: 'ownership is ownership is ownership. The copyright owner owns the intellectual works in the same sense as the landowner owns land.'⁵³ So far, Lockean theory developed in the eighteenth and nineteenth centuries has contributed to the proliferation of intellectual property rights, encompassing progressively greater quantities and kinds of activity.⁵⁴ As Samuel Oddi suggests, during the process of global policy-making, Locke's natural rights theory was submitted to have played a major rhetorical role in the strategy of industry groups dominated by multinational corporations (MNCs) to convince their governments in developed countries to demand 'adequate' protection of intellectual property.⁵⁵ The US plays a notable role in the expansion of global intellectual property. As James Boyle has pointed out vividly, the US is particularly active in standing up *morally* for the rights of the 'original genius' of Western inventors and authors in its fight against the global pirates.⁵⁶

Once intellectual property rights are considered as natural rights, the opponents are often tongue-tied in that on the polite international roundtable no rhetoric would be more powerful than the argument grounded on the basic morality of human nature -- praising labour and condemning stealing. The power of the 'sanctity of property' is incredibly powerful. The prominent academic lawyer Lawrence Lessig has given an example: when discussing the price of AIDS drugs in Africa, there is 'a fear of the grandstanding US politician who would call the presidents of the drug companies before a Senate or House hearing, and ask, "How is it you can sell this HIV drug in Africa for only \$1 a pill, but the same drug would cost an American \$1,500?"'; because there is no 'sound bite' answer to that question, its effect would be to induce regulation of prices in America. As Lessig said, the drug companies thus avoid this question by avoiding the first step; they reinforce the idea that property should be sacred.⁵⁷ It is interesting to point out that to a certain degree the notion of private property rights in relation to intellectual works, as Keith Aoki notes,

⁵² Linda R. Cohen & Roger G. Noll, 'Intellectual Property, Antitrust and the New Economy', 62 *U. Pitt. L. Rev.* 453 (2001), p. 456.

⁵³ Sub-Committee on the Revision of Copyright (Canada), *A Charter of Rights for Creators*, Ottawa: Standing Committee on Communications and Culture, 1985, p. 9.

⁵⁴ Zimmerman, 'Information as Speech, Information as Goods', p. 674.

⁵⁵ A. Samuel Oddi, 'TRIPS - Natural Rights and a "Polite Form of Economic Imperialism"', 29 *Vand. J. Transnat'l L.* 415 (1996), p. 432.

⁵⁶ James Boyle, *Shamans, Software & Spleens: Law and the Construction of Information Society*, London: Harvard University Press, 1996, p. 123.

⁵⁷ Lawrence Lessig, *Free culture: how big media uses technology and the law to lock down culture and control creativity*, New York: Penguin Press, 2004, pp. 260-61.

even appears somehow to have emerged unscathed while in the corporeal world the concept of private property itself has been disaggregated by political and legal theorists.⁵⁸

The powerful grip of the Lockean approach on the legal imagination is ubiquitous. Courts are often deeply influenced by Lockean theory. American judges in copyright cases frequently find a warrant for strong ‘authors’ rights’ in the philosophy of natural law.⁵⁹ American lawmakers have adhered stubbornly to the Lockean vision of intellectual property.⁶⁰ The ‘unnatural’ expansion of trademark in recently years is largely attributable to a new receptivity to Locke’s ‘unseen hand’.⁶¹ Even those scholars who incline to be sceptical to the unreasonable expansion of intellectual property are often unable to walk out of Locke’s shadow. Wendy Gordon tries to loyally construe the satisfaction of the Lockean Proviso as not inflicting harm on others: if a new creation renders the common less valuable, the Proviso gives people a privilege to use the new creation to the extent necessary to make themselves as *well off* as they previously were.⁶² However, as will be discussed in Chapter Nine, the goal of modern intellectual property law cannot be satisfied by merely not worsening off. Rather, it must be able to positively improve our society by promoting education and health, fighting poverty, and reducing the gap between North and South.⁶³ The arguments provided by the Neo-Lockean scholar Adam Moore are even narrower. As he repeatedly suggested, the Lockean Proviso can be understood as the ‘no harm, no foul’ principle, which should be examined as a *sufficient* condition rather than a *necessary* condition for legitimate appropriation: if one’s acquisitive behaviour makes no one else worsen off, then there is no room for rational complaint.⁶⁴ To use Moore’s own logic, ‘if a loss of social progress is the price that must be paid for upholding rights then so be it’.⁶⁵

In sum, the eighteenth-century history of British publishing monopoly from which the Lockean theory was born has fundamentally influenced our modern understanding of intellectual property. The Lockean theory of property rights has several demerits marked by the particular historical background of Locke’s time. When it was transplanted into the

⁵⁸ Keith Aoki, ‘Intellectual Property and Sovereignty’, 48 *Stanford Law Review* 1293 (1996), p. 1338.

⁵⁹ Wendy J. Gordon, ‘A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property’, 102 *Yale Law Journal* 1533 (1993), p. 1535.

⁶⁰ Boyle, *Shamans, Software & Spleen*, p. 123.

⁶¹ For a detailed analysis, see Kenneth L. Port, ‘The “Unnatural” Expansion of Trademark Rights: Is a Federal Dilution Statute Necessary?’, 18 *Seton Hall Legis. J.* 433 (1994), pp. 482-87.

⁶² Gordon, ‘A Property Right in Self-Expression’, pp. 1561-62.

⁶³ For a comprehensive study on this issue, see Commission on Intellectual Property Rights (UK), *Integrating Intellectual Property Rights and Development Policy – Report of the Commission on Intellectual Property Rights*, London September 2002, p. 6. (Hereafter, *Report 2002*) Online at: http://www.iprcommission.org/papers/word/final_report/reportwordfinal.doc (last visited: 25th November 2005), p. 1.

⁶⁴ Moore, ‘A Lockean Theory of Intellectual Property’, pp. 78-79.

⁶⁵ *Ibid.*, p. 99.

fields of knowledge products, its demerits become more obvious. As the renowned copyright expertise Ray Patterson pointed out, retaining the fiction of property right under natural law causes people to lose sight of copyright's underlying goal -- the promotion of learning.⁶⁶

It is noteworthy that intellectual property is not always supported by strong defenders of property. For instance, the distinguished nineteenth-century American legal theorist Lysander Spooner (1808-1887) steadfastly championed strong intellectual property rights while William Leggett (1802-1839), a noted American writer, advocated with equal force the unrestricted exchange of ideas. Although they came to opposite conclusions, each argued that his beliefs were consistent with his overall stance in favour of liberty, private property, and freedom of trade.⁶⁷ This phenomenon rather indicates that Lockean theory is not necessarily and uniquely suitable for intellectual property; there are visible theoretical possibilities for non-Lockean theories to lead the relevant discourses. For instance, the 'social planning theory' advocated by William Fisher and some others, if applied, could better achieve the goal of intellectual property laws.⁶⁸ Unfortunately, in the childhood of human society's intellectual property practice, some particular historical events accidentally and even hastily made us place our main theoretical emphasis on strong natural rights, leaving us to overlook some other fundamentally and equally important issues such as the public interest.⁶⁹

7.4. Incentive theory and its alliance with the Lockean justification

⁶⁶ L. Ray Patterson & Stanley W. Lindberg, *The Nature of Copyright: A Law of Users' Rights*, Athens: The University of Georgia Press, 1991, pp. 134-45. The authors of this book take the position that only copyright as the grant of a limited statutory monopoly can serve as the basis for a soundly integrated copyright law. *Ibid.*, p. xi.

⁶⁷ Palmer, 'Are Patents and Copyrights Morally Justified?', pp. 43-44. Lysander Spooner, 'A Letter to Scientists and Inventors, on the Science of Justice, and Their Right of Perpetual Property in Their Discoveries and Inventions', in *The Collected Works of Lysander Spooner*, Vol. III, ed. by Charles Shively, Weston, Mass.: M&S Press, 1971. William Leggett, *Democratic Editorials: Essays in Jacksonian Political Economy*, ed. by Laurence H. White, Indianapolis: Liberty Press, 1984.

⁶⁸ William Fisher, 'Theories of Intellectual Property', in *New Essays in the Legal and Political Theory of Property*, S. Munzer (ed.), Cambridge: Cambridge University Press, 2000, pp. 168-200.

⁶⁹ In fact, a quasi-modern concept of authorship did not grow in England until the development of the professional authorship in connection with the decline of patronage after the middle of the eighteenth century, suggesting that when the Statute of Anne was passed and Lockean theory was grafted, intellectual property practice was rather in its childhood. Rose, *Authors and Owners*, p. 4. It is interesting to examine the historical influence on the public domain model of intellectual property regime. As Julie Cohen argues, the influence of the public lands model is something of a historical accident; If models of the cultural public domain are to be judged solely against standards of historical fidelity, the public lands model is not the only or even the leading candidate. Julie E. Cohen, 'Copyright, Commodification, and Culture: Locating the Public Domain', *Public Law & Legal Theory Working Paper Series*, Georgetown University Law Center, Working Paper No. 663652; Draft 31 Jan 2005. Online at: <http://ssrn.com/abstract=663652> (last visited 11 September 2006), pp. 1-17.

The Lockean justification of intellectual property can be formulated as an ‘if...then property rights’ logic: if labour is properly employed, then property rights occur. Other interests related to knowledge therefore become secondary rather than equally important. Does the incentive theory based on the rule-utilitarian argument have a similar inclination?

Although the influence of the Lockean justification should not be overlooked,⁷⁰ modern Anglo-American systems of intellectual property are easily modelled as rule-utilitarian.⁷¹ This is an economic argument, which requires measures to be employed to increase social benefits. As has been discussed elsewhere, the rule-utilitarian argument views knowledge as non-rivalrous and non-excludable. Non-rivalry means that knowledge can be used by an infinite number of people in an infinite number of ways without harming the use value of any other person. This in turn results in the problem of excludability, which means people cannot practically be excluded from obtaining and reproducing knowledge. The rule-utilitarian argument therefore suggests that in the context of commercialization of knowledge products, the non-rivalrous and non-excludable nature of the intangible knowledge will result in market failure because unauthorized copiers can use significantly lower costs to reproduce the knowledge products created by others. Thus, to stimulate creativity, exclusive rights must be granted to provide incentives to the knowledge creators.⁷²

It seems that the rule-utilitarian incentive argument is not as strong as the Lockean theory of natural property rights. However, the reality is that the incentive theory tends to get converted into an individualistic argument.⁷³ A standard and unquestioned assumption is that *only* by intellectual property rights can knowledge creativity be stimulated.⁷⁴ Apparently the logic of ‘if ... then property rights’ meets its analogue here and is only revised to ‘only property rights can ...’ As Mark Lemley has pointed out, the incentive theory is influenced by the Chicago School law-and-economics movement that emphasizes the importance of private ownership as the solution to the economic problem known as the ‘tragedy of the commons’.⁷⁵ The incentive theory is *de facto* the strongest and most widely appealed to justification for the appropriation of knowledge. Although it

⁷⁰ For a case study of the powerful influence of Locke’s intellectual property justification in common law countries, see Craig, ‘Locke, Labour and Limiting the Author’s Right’, pp. 15-21.

⁷¹ Moore, ‘A Lockean Theory of Intellectual Property’, p. 66. Neil Weinstock, ‘Copyright and a Democratic Civil Society’, 106 *Yale Law Journal* 283 (1996), p. 307.

⁷² For more details, please see Chapter Eight.

⁷³ Jeremy Waldron, ‘From Authors to Copiers: Individual Rights and Social Values in Intellectual Property’, 68 *Chi.-Kent. L. Rev.* 842 (1993), p. 856.

⁷⁴ Ruth Gana Okediji, ‘Perspectives on Globalization from Developing States: Copyright and Public Welfare in Global Perspective’, 7 *Ind. J. Global Leg. Stud.* 117 (1999), p. 155.

⁷⁵ Mark A. Lemley [review], ‘Romantic Authorship and the Rhetoric of Property’, 75 *Tex. L. Rev.* 873 (1997), pp. 895-97.

starts out as a basis for strictly limiting the assignment of intellectual property rights, in the end, it becomes a vehicle to justify their proliferation and expansion throughout the centuries.⁷⁶

Moreover, the incentive theory is often used together with the Lockean theory, despite the fact that they largely counter each other. Over time, legislators tended to conflate incentive theory and the Lockean natural law theory in the attempt to justify the broadening of intellectual property protection.⁷⁷ Reasons may be complex but it seems that the incentive theory may strike judges as particularly salient in developing an undercurrent of moral desert justification. One is the aspect of talent. The other aspect is that of cost.⁷⁸ As Alfred Yen argues, when the labour-desert intuition joins the plaintiff's economic argument that more intellectual property protection necessarily improves welfare by inducing more creative labour, the continued expansion of intellectual property would hardly seem surprising.⁷⁹

It seems that Locke's logic of propertization -- even if not Locke's property theory itself -- has deeply rooted itself in our thinking on intellectual property. To borrow Peter Drahos's words, Locke remains a powerful totem.⁸⁰ But why shall economic analyses be limited to the 'only property rights can ...' logic? As will be discussed in Chapter Nine, in many cases alternative models can be used to replace intellectual property regimes for the purpose of providing sufficient incentive. From an economic perspective, the logic of propertization does not always work.

7.5. Strong property and Hegelian argument

In addition to the Lockean justification and incentive theory, the Hegelian theory traditionally used in European civil law countries is the third popular rhetoric of intellectual property.⁸¹ It is not the focus of this research as it is less relevant to the

⁷⁶ Stephen Breyer, 'The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs', 84 *Harv. L. Rev.* 281 (1970), p. 324.

⁷⁷ Zimmerman, 'Information as Speech, Information as Goods', pp. 690-703.

⁷⁸ Waldron, 'From Authors to Copiers', pp. 852-53.

⁷⁹ Alfred C. Yen, 'Restoring the Natural Law: Copyright as Labor and Possession', 51 *Ohio State Law Journal* (1990), p. 547.

⁸⁰ Peter Drahos, *The Philosophy of Intellectual Property*, Aldershot: Dartmouth Publishing Company Ltd., 1996, p. 48.

⁸¹ These theories are often used jointly. As William Fisher argues, most of the recent theoretical writing consists of struggles among and within four approaches: utilitarian argument, labour theory, personality theory, and social planning theory. The last one is a brand-new theory advocated by Fisher and some others. Fisher, 'Theories of Intellectual Property', pp. 168-69. James DeLong used a different type of taxonomy:

hottest discourses of global intellectual property issues. But one thing is noteworthy: compared with the Lockean theory and incentive theory, the Hegelian theory even puts more focuses on the relationship between knowledge creator and strong property rights.⁸²

Personality is the beginning of Hegel's argument about property. For Hegel, the individual's will is the core of the individual's existence, constantly seeking to actualize the individual himself.⁸³ As Hegel writes, '[a] person must translate his freedom into an external sphere in order to exist as an Idea' and that '[p]ersonality is the first, still wholly abstract, determination of the absolute and infinite will.'⁸⁴ Therefore, to obtain proper self-development -- to be a person -- an individual needs some control over resources in the external environment.⁸⁵ Of course, it is only by property right over the external resources that a person can achieve reassuring self-development. Hegel's rhetoric very much accords with human nature: individuals need foods, houses, resources, money and the like to maintain and develop their lives.

The Hegelian flavour of property seems to be stronger than that of Locke's theory. Hegel argues: 'a person has the right to place his will in *any* thing... The thing thereby becomes [his].'⁸⁶ Thus, property, because it embodies the will or personality of its originator, must belong to that person.⁸⁷ When this absolute phrasing is applied in the fields of intellectual property, it becomes more powerful. As Linda Lacey argues, works of art which are created through a person's brain embody more of his individual essence of being than works created through routine physical labour, suggesting that the producer should never be completely separated from the work.⁸⁸ Apparently, under the Hegelian theory, the knowledge creator is the focus, leaving the public interest largely unconcerned. Hegel opened a possibility to give the law unscrupulous power to put intangible things into the protection list of property.⁸⁹ It is not surprising that Hegel's property theory was also born in the particular time of early nineteenth-century Prussia, which was left behind

morality or Lockean justice, economics, politics, psychology or 'personality'. DeLong, 'Defending Intellectual Property', in *Copy fights*, pp. 25-27.

⁸² Linda J. Lacey, 'Of Bread and Roses and Copyrights', 1989 *Duke L.J.* 1532 (1989), p. 1564.

⁸³ Hughes, 'The Philosophy of Intellectual Property', p. 331.

⁸⁴ Georg W. F. Hegel, *Philosophy of Right*, trans. by T.M. Knox, New York: Oxford University Press, 1967, p. 41.

⁸⁵ Stephen J. Radin, 'Property and Personhood', 34 *Stan. L. Rev.* 957 (1982), p. 957.

⁸⁶ Georg W. F. Hegel, *Hegel's Philosophy of Right*, ed. by Allen W. Wood, Cambridge: Cambridge University Press, 1991, p. 44.

⁸⁷ Hughes, 'The Philosophy of Intellectual Property', p. 329.

⁸⁸ Lacey, 'Of Bread and Roses and Copyrights', p. 1542.

⁸⁹ Rolf Knieper, *Gesetz und Geschichte: Ein Beitrag zu Bestand und Veränderung des Bürgerlichen Gesetzbuchs*, Nomos, Baden-Baden 1996, p. 279.

England and France. Hegel devoted his entire life to safeguard liberty and property, by which he believed that a united and modernized Germany would become a reality.⁹⁰

7.6. Conclusions

Article I, Section 8 of the US Constitution gives Congress the power to ‘promote the progress of science and useful arts’.⁹¹ This Article, which becomes the constitutional ground of justifying intellectual property in the US, indicates that intellectual property should be understood as a means to achieve a broader goal of promoting the public interest. However, the traditional intellectual property theories such as the Lockean justification, incentive theory and Hegelian argument mistakenly find the justification for intellectual works in a ‘knowledge creation -- property’ logic, rather than in the role played by intellectual works in the processes of social dialogue.⁹² This logic, as has been illustrated in this chapter, is deeply rooted in some historical particularities of the seventeenth to eighteenth century Western Europe where guild monopoly was strong.

It is worth reiterating that intellectual property *per se*, as it takes the form of exclusive rights, is not preposterous; it well accords with the nature of knowledge and has been developed throughout centuries in Europe and China. However, as the historical inquiry made in previous chapters has illustrated, intellectual property is not the only important thing and must be theorized in a broader social context.⁹³ How to do so? This crucial question will be explored in the next two chapters.

⁹⁰ For an eloquent analysis of Hegel’s theory and his historical background, see Ji Po-min, *canquan yu fa (Property and Law)*, Beijing: sanlian shudian, 2001. Also see Tom Rockmore, *Before and After Hegel: A Historical Introduction to Hegel’s Thought*, London: University of California Press, 1993.

⁹¹ For an examination of the constitutional framework of American intellectual property laws, see Edward C. Walterscheid, *The Nature of the Intellectual Property Clause: A Study in Historical Perspective*, New York: William S. Hein & Co., Inc., 2002.

⁹² Carys Craig has penetratingly pointed out the fundamental mistake of the Lockean theory as a misplacement of the role of the creator in a broader social context. Craig, ‘Locke, Labour and Limiting the Author’s Right’, pp. 1-2. I share many views with Craig in this regard.

⁹³ This is similar to the approach adopted by Zimmerman, ‘Information as Speech, Information as Goods’, p. 740.

CHAPTER EIGHT

An Alternative Theoretical Starting Point for Intellectual Property: Examining the Purpose, Role and Nature of Knowledge

*Knowledge is, in every country,
the surest basis of public happiness.*

-- George Washington (1732-1799), first President of the United States. ¹

This chapter tries to relocate the theoretical ‘starting point’ of intellectual property from ‘knowledge creation -- property’ to the investigation of the purpose, role and nature of knowledge *itself* to see why protecting the interests of both knowledge creators and knowledge users have been practically proved to be equally important throughout human history. This matter, as will be demonstrated, needs to be understood from an epistemological perspective. To start, an empirical observation of the objective imperfectness of the world in which mankind lives is presented. The subjective reason of the imperfectness can be ascribed to the limited perceptive ability of the human brain, which naturally prevents us from understanding deeply about the existing world; however, the human brain has a positive function to perceive and in turn create new knowledge to overcome the imperfectness. The epistemological perspective has two significances: the ultimate purpose of having knowledge is to use it; and knowledge creativity plays a fundamental role in providing better knowledge for the public to use.

This chapter further argues that knowledge use and knowledge creativity have an inherently inter-nutritional and inter-conflicting nature. On the one hand, furthering creativity is subject to the limited perceptive ability of the human brain and therefore requires a rich environment of cumulative knowledge, which can only be achieved by promoting knowledge dissemination and use; newly created knowledge, when disseminated, will promote better use of knowledge and in turn nourish more creativity. This suggests an inter-nutritional relationship between knowledge use and knowledge creativity. On the other hand, due to the non-rivalrous and non-excludable nature of knowledge, uncontrolled knowledge use may result in free riding and market failure and heavily stifle attempts to invest in creating new knowledge; controls such as intellectual property regimes may restrict the access to new knowledge as well as further creativity. In this regard, it seems that the relationship between knowledge use and knowledge

¹ L. Ray Patterson & Stanley W. Lindberg, *The Nature of Copyright: A Law of Users’ Rights*, Athens: The University of Georgia Press, 1991, p. 1.

creativity is inter-conflicting. This inherent nature of knowledge is different from tangible things, which have clearly defined boundaries. It is therefore necessary to understand intellectual property issues from knowledge itself rather than tangible property.

8.1. Knowledge and the imperfectness of this world: an epistemological perspective

The world in which human beings exist is a favourite topic for every civilization to ponder. Empirically, religions have undertaken the arduous task of probing into this matter and have provided some answers. Although different genres of thinking have reached varied and even entirely conflicting conclusions, it seems that few of them labels this world as consummate. Buddhism construes the inherent nature of this world as imperfectness. The first sermon that Siddhartha Gautama gave in Mrgadava after he enlightened himself under the Bodhi tree was the Four Noble Truth: suffering, its origin, cessation and path. Suffering, which is a result of the pain stirred by objective limitations such as death and decrepitude and the grief of the mental innerness such as anger and jealousy, is the essence of this world.² The Genesis of the Bible does not begin with suffering. Instead, it sounds quite joyful when ‘the Spirit of God moved upon the face of the waters’ and then ‘God said, Let there be light’.³ But soon the Bible turns to describe many imperfect things starting from the end of Eden and the beginning of the Flood. Other monotheistic or polytheistic religions such as Judaism, Islam or Hinduism all share the same enthusiasm for picturing the imperfectness of this world. Some of their records even tell us that this world is only too painful. Religions are spiritual but closely linked with the material aspects of this world. To understand the religious matter from scientific perspective, it could be argued that their understandings of the imperfectness of this world originate from early mankind’s observation of the pains engendered from various disasters, wars, difficulties of subsistence, and the dark side of human nature. There are so many wonderful and cherishable things in this world such as the blue sky, singing birds, and love and benevolence; however, to survive and develop, human societies have to face the inescapable imperfectness of this world and seek solutions continuously.

How does Confucianism, the representative of native Chinese thinking, observe this world? Confucianism is secular rather than religious and its classic records of the imperfectness of the world might be less horrific than those depicted by religions. Confucian understandings of the material aspects of this world, which can be found in

² Edward Conze, *Buddhism: Its Essence and Development*, Oxford: Cassirer, 1960, pp. 43-47.

³ *Genesis*, the Bible, 1:2, 1:3.

various places in its Classics, normally begin with the description of the hardships of the pre-historic times followed by some beautiful stories telling how the committed elitists or sage kings tried to overcome these difficulties and lead the people to improve their lives. This scenario had been repeated from one generation to another. As has been sufficiently illustrated in previous chapters, it originated one of the Confucian political credos, which argues that a qualified government must be able to give priority to the effective improvement of social welfare; throughout Chinese history, true Confucian adherents always commiserated the hardship of the material aspects of this world and regarded changing it as their social responsibility, no matter whether they were high ranking officials or laymen living in the countryside.⁴

The attention paid to the spiritual aspects of this world in Confucianism is just as explicit as with religions. In some periods of China's history, it also developed to a sophisticated level. Orthodox Confucianism is famous for viewing human nature as originally good (*xing ben shan*). It is commonly argued that Confucianism is notably too optimistic about the goodness of human nature, indicating that Confucianism ignores the visible imperfectness of it. This view needs to be reconsidered. The logic of the original goodness is quite similar to that of Buddhism and Christianity. All of these thoughts believe that human nature is initially as well as ultimately perfect but returning to or arriving at that perfect condition requires some tough efforts.⁵ The Confucian school primers, *Sanzi Jing* (Three-characters Book), begins its first paragraph with one of Confucius's famous sayings: 'by nature, men are nearly alike; by habits, they get to be wide apart'.⁶ That Confucianism views the spiritual world as inconstant is a counterevidence indicating the imperfectness of the spiritual world existing at this given moment. As argued by Liu Zong-zhou (1578-1654), one of the most creative Chinese thinkers of the seventeenth century, ontologically human nature is good but in reality everyone has to fight against his double nature.⁷ Perfectness may even be a dream because the positive progress of upgrading one's innerness may be endless and sometimes never reachable.⁸ However, Confucianism is quite optimistic; it gives those who are dwelling on different spiritual and intellectual levels opportunities to renovate themselves and to return to their original goodness.

⁴ For further details, see Chapter Three and Five.

⁵ Tu Wei-ming, 'On the Mencian Perception of Moral Self-Development', 61 *The Monist* (1978), pp. 72-81.

⁶ *Yanghuo, Lun Yu*.

⁷ Tu Wei-ming, *Way, Learning and Politics: Essays on the Confucian Intellectual*, Singapore: Institute of East Asian Philosophies, 1989, p. 100.

⁸ Mou Zong-san, *Xianxiang yu wu zishen (Phenomena and Thing in Itself)*, Taipei: xuesheng shuju, 1976, pp. 453-55.

What are the solutions provided by the above-mentioned great thoughts of ancient civilizations? Buddhism attributes the causation of the suffering occurring in both the material and spiritual world to the desire of human nature. This causes karma, and, in turn, samsara (rebirth) and its consequent suffering. The ultimate way of changing this endless circle is to improve one's inner wisdom so as to transcend the normal existence of this world where human beings live and eventually achieve the Buddha's unimaginable emancipation of nirvana.⁹ For Christianity, the world created by God was initially a perfect garden for the immaculate mankind to live. It became imperfect because mankind's ancestors broken the good relationship with God. Its solution is to believe in God and follow the way of Jesus, which will eventually lead human beings to Heaven.¹⁰ These solutions, as well as many provided by other religions, are seemingly different but all of them look for ultimate hopes of overcoming the imperfectness from another supernatural world instead of this world.¹¹ The monotheists believe that Heaven exists above the earth and is governed by God. The worlds of Buddha exist both in the universe and inside our original spiritual innerness. Surely none of them is our messy rocky planet.

The Confucian search for solutions takes a quite different humanistic approach. Compared with religions, Confucianism is a secular philosophy and focuses more on this world, albeit it does not lack some metaphysical characters of religion. Ultimately it agrees that there is another world, which is above this world. However, it inclines to start from this world rather than another. It seems that Confucianism tries to compromise between the two worlds. Its ontology is firmly established in this world, which is regarded as the foundation of improvement; but sometimes we do need to transcend this world and enter the metaphysical or even divine world and the latter will guide the former. This nature, as the noted Neo-Confucian scholar Fang Dong-mei puts it, is called 'transcendental metaphysics'.¹² In its logic, the focus is human beings *in* this world. Humanism has become the philosophical foundation of Confucianism since Confucius. *The Analects* tells a story that when a livery stable was on fire Confucius asked about the injury of the liveryman instead of the horses;¹³ at that time, the price of a slaved liveryman was even lower than that of a horse, the *Analects* emphasizes this example in

⁹ Edward J. Thomas, *The History of Buddhist Thought*, Routledge & Kegan Paul, 1951, pp. 107-32.

¹⁰ John Kelly, *Early Christian Doctrines*, London: Black, 1958, pp. 87-90.

¹¹ It is however noteworthy that religions such as Christianity and Buddhism have already been modernized to a certain degree to shift their focuses from another world to this world.

¹² Fang Dong-mei, 'Zhongguo xinger shangxue zhi yuzhou yu geren (Universe and Individual in Chinese Metaphysics)', *Zhongguo wenhua de tezhi (The Characteristics of Chinese Culture)*, ed. by Liu Xiao-feng, Beijing: sanlian shudian, 1990, p. 1.

¹³ *Xiangdang, the Analects*.

order to signal the very humanistic nature of Confucianism.¹⁴ As one of the greatest Confucian thinkers Wang Fu-zhi (1619-1692) said, human beings are the most intelligent creatures of this world and are therefore the heart of heaven and earth.¹⁵

The character of secular Confucianism, or at least its *way* of thinking, is noteworthy: it recognizes the imperfectness of the material and spiritual world while positively seeking solutions in this world instead of another. These solutions, quoting the noted scholar Cheng Zhong-ying, are rooted in the Confucian approach of exploring a thread of values of this world, which integrate universe, mankind and human society all together.¹⁶

Hence, for Confucianism, eventually there is no mysterious power to be blamed for the imperfectness of this world. But how can the Confucian approach figure out the solutions to achieve positive improvement? The best way to think about this matter is to examine epistemology. Superficially, it seems that the imperfectness of the material world is a result of the violent side of the universe and the inherent imperfect biological life form of human beings. Natural disasters frequently occur, which greatly affect the living condition of mankind who yet have to struggle to support their brittle physical structures. Various physical and psychological difficulties thus burgeon and proliferate.

From an epistemological perspective, the imperfectness of this world can be explained as a consequence of the very limited perceptive ability of the human brain to understand the material (or outer) and spiritual (or inner) world. Why is the ability of the human brain to perceive the world so limited? Intuitively speaking, the functions of our eyes, ears, noses, mouths and bodies are rather restricted and consequently the information received by our brain is naturally limited by our senses. Although it is likely that in the future the incredible brainpower could be opened up by science or religions, it has rarely been possible that by our known experience an objective world can be known with certainty by a subject whose capacity for knowledge is independent of that world.¹⁷ However, fortunately, the human brain has a unique and positive function: it has a talent to intelligently explore this world. It can perceive, learn and grasp a vast amount of knowledge and eventually create new technologies to better our life quality and religions,

¹⁴ For further details about Confucius's humanistic thinking, see Pan Fu-en and Xu Yu-qing, 'Kongzi renxue sixiang lunping (On Confucius's Humanistic Thinking)', *Kongzi danchen 2540 zhounian jinian yu xueshu taolun ji (Essay Collections for the 2540 Anniversary of Confucius)*, Confucius Foundation of China, Shanghai: sanlian shudian, 1992, pp. 876-81.

¹⁵ Wang Fu-zhi, *Zhouyi waizhuan (Complementary Records of Yi-ching)*, vol. 2; 5.

¹⁶ Li Xiang-hai (ed.), *Zhishi yu jiazhi – Cheng Zhong-ying xin ruxue lunzhu jiyao (Selected Essays of Cheng Zhong-ying's Studies of Neo-Confucianism)*, Beijing: Zhongguo guangbo dianshi, 1996, p. 310.

¹⁷ Rosemary J. Coombe, 'Objects of Property and Subjects of Politics: Intellectual Property Laws and Democratic Dialogue', 69 *Tex. L. Rev.* 1853 (1991), p. 1858.

philosophies, literatures and arts to please and refine our souls. The entire history of human evolution is a process of continuously studying and improving the outer and inner worlds. It is to the limited perceptive ability of the human brain that we could blame for the imperfectness of this world but to its unique and exceptional intelligence we must appreciate for our lucky chances of getting better.

Samuel Oddi is one of few scholars who applied an epistemological perspective to understand intellectual property issues. By borrowing Locke's theory he suggested that there are only two sources of ideas: 'sensation' and 'reflection'. Ideas of the 'sensation' category are from perceptions of things ('external objects') depending wholly on our senses, and derived by them to the understanding. The other source of ideas, 'reflection', is internal from the 'the perception of the operations of our minds within us'.¹⁸ That the human brain entirely relies on external objects at the first stage of perception while it is able to process, think and even create at the second stage of perception rightly describes its limited but intelligent perceptive ability.¹⁹

The above-indicated Confucian perspectives on facing the imperfectness of this world and in turn seeking possibilities for improving it within this world is *de facto* rooted in Confucian epistemology of the limited but intelligent perceptive ability of the human brain. Confucius did not view himself as a prophet who can perceive things without learning.²⁰ As he humourously articulated, 'there must be many individuals who are as moral as I am, but I am probably the most studious one.'²¹ Confucius is not inordinately humble. As Mencius (371 BC-289 BC) suggested, 'when we perceive, we get knowledge; otherwise, we get nothing'.²²

8.2. The purpose and role of knowledge

The double character of limited but intelligent perceptive ability of the human brain rather explains the subjective reason for the imperfectness of this world and the subjective possibility of overcoming it. If we want to overcome imperfectness *in* this world, the only

¹⁸ A. Samuel Oddi, 'The Tragicomedy of the Public Domain in Intellectual Property Law', 25 *Hastings Comm. & Ent. L.J.* 1 (2002), p. 14.

¹⁹ For further details about sophisticated systems of epistemology developed by some Neo-Confucian scholars such as Xiong Shi-li and Mou Zong-san, see *e.g.*, Wang Xing-guo, 'Dui Mou Zong-san de luoji er'fen fa sixiang de chubu liaojie (A Primary Study of the Dichotomy Logic of Mou Zong-san)', 20 *Er'hu xuezhì (Er'hu Academic Journal)* (1998), pp. 56-70.

²⁰ *Xuer, the Analects.*

²¹ *Gong ye chang, the Analects.*

²² *Gaozi shang, Mengzi.*

hope is to use knowledge, the sum or range of what has been, and will be, perceived, learned, discovered or created. Both the material and spiritual worlds rely on the use of knowledge. First, we will have to aim at acquiring thorough knowledge to improve the material world. Otherwise, as Mencius pointed out, it is unrealistic to importune society to reach morality, social peace and happiness.²³ Improving the spiritual world is necessary to the grasp of sufficient knowledge to improve the material world;²⁴ but the improvement of the material world is by no means the ultimate goal of overcoming imperfectness and it must be able to help the sublimation of our spirits. As pointed out by the Confucian canon *Da Xue* (the Great Learning), ‘from the emperor to the ordinary people, self-cultivation is the foundation for everyone’.²⁵ Ultimately, by using knowledge to improve the material and spiritual world, mankind will be able to approach the extramundane world.²⁶ Therefore, the ultimate purpose of having knowledge is to use it.

Let us envision some ordinary scenarios that are likely to happen in our world: a new and reasonably priced drug helps Africans to stay away from AIDS; a new irrigation technology spreads effectively, enabling Chinese peasants living in the northern highlands to conquer poverty; a young American is inspired by a touching movie, by which he learns how to live. To put them another way, we need ‘material use’ of knowledge such as wearing cloths and taking medicine, and we need ‘intellectual use’ of knowledge such as learning skills to become an apprentice and reading a novel to laugh. Some users may never want to, or be able to, create any knowledge but they still have the rights to use knowledge. Broadly speaking, however, many users will to some degree become future creators, whose use of knowledge is, as the following will argue, often dedicated to promoting further creativity, and therefore can be called ‘creative use’. All three types of knowledge use require knowledge to be disseminated and accessed.

But what kind of knowledge do we need to use? Apparently only by continuous creativity will more new knowledge be presented to better the use of knowledge and in turn to improve this world. Many religions are also aware of the double character of the human brain and in turn the importance of knowledge.²⁷ When coming to the extent of

²³ *Teng wengong, Mengzi.*

²⁴ For an analysis of the relationship between spiritual knowledge and material world, see Tu Wei-ming, *The Modernization of Confucian Tradition*, Beijing: Zhongguo guangbo dianshi, 1992, pp. 501-16.

²⁵ *Xiaodai liji, Daxue.*

²⁶ For a discussion of the relationship between knowledge and the improvement of mankind society, see Tu Wei-ming, ‘Chuantong rujia sixiang zhong de ren de jiazhi (The Value of Human in Traditional Confucian Thoughts)’, in his *Rujia sixiang xinlun – chuangzao xing zhuanhuan de ziwo (A New Understanding of Confucianism – Selfhood as Creative Transformation)*, Nanjing: Jiangsu renmin, 1996, p. 75.

²⁷ Some of them even have more insightful opinions than Confucianism does. For instance, one of the most sophisticated theoretical bedrocks of Buddhism is the profound understanding of the limited perceptive ability of human brain. Liu Gui-jie, *Buddhist Philosophy*, Taipei: Wunan, 2006, ch. 8.

knowledge to which we need to surmount the limited perceptive ability and then improve this world, religions incline to minimize the role of creating new knowledge. The knowledge needed for Buddhist practices ultimately depends on not books but extramundane meditation, by which an individual may suddenly understand every detailed truth of the entire universe. However, the Zen-style meditation is an immediate solution for only an extremely small population whose level cannot be reached by the overwhelming majority. Monotheistic religions such as Christianity may be closely tied to biblical knowledge but believers are overwhelmingly required to practise the Bible, which may powerfully prohibit them to contact new knowledge, which is potentially heretical. For instance, Christians do not want to use Darwin's evolutionism to overcome the imperfectness of this world and in fact evolutionism is firmly refused to be digested by many of them.²⁸ Religions themselves have developed a huge amount of knowledge and in some periods regions have dramatically promoted scientific development. However, they do not positively require human society to thoroughly develop its intelligent perceptive ability and to acquire knowledge as infinite as it can.

The religious approaches should not be viewed as fanciful. Their knowledge *per se* is important and beneficial. They may also have ultimate significances far beyond the current human perception. However, for the daily life of this world, it is not realistic to solely rely on religious practices in that we cannot avoid facing some immediate demands such as curing a disease, building a bridge or deciding a legal case. In addition to extramundane explorations that do not fundamentally rely on epistemology, we still need to figure out substantial and workable solutions for the improvement of this world, to which the role of knowledge creativity is determinative.

Continuously acquiring new knowledge to improve this world well accords with the Confucian understanding of the endlessly, positively and progressively creative nature of the universe discussed in chapter Three. Confucianism believes that invigorating the intelligent perceptive ability of the human brain satisfies the universe's mandate which requires human beings to join the creative process of the universe. As Wang Fu-zhi (1619-1692), one of the greatest Confucian thinkers, suggested, 'animals throughout their entire lives can only follow their primitive destinies while human beings can change their lives every day'.²⁹ Otherwise, as he argued, why have we improved our morality and living condition?³⁰ Therefore, the Confucianism-like approach, which focuses on human

²⁸ James R. Moore, *The Post-Darwinian Controversies*, Cambridge: Cambridge University Press, 1979, p. 193.

²⁹ Wang Fu-zhi, *Shi guang zhuan*, vol. 4.

³⁰ Wang Fu-zhi, *Xu Chunqiu Zuoshi zhuan boyi*, part 2.

beings in this world, substantially relies on perceiving an immense amount of knowledge. As Zhu Xi (1130-1200), one of the most successful Confucian philosophers, argued, the improvement of this world must be based on sufficient learning of a substantial amount of knowledge. A man full of creativity, Zhu was even extremely ambitious to absorb all obtainable knowledge. As he said, ‘When we entirely perceive the knowledge of this world, our understanding [of this world] will become extensive and unobstructed.’³¹

Zhu’s enthusiasm, which was strongly influenced by the fact-based scientific approach of the Song dynasty,³² is not ridiculous. At the initial stage of human evolution, due to the limited perceptive ability of the human brain, human society only had very limited amount of basic knowledge such as murmuring a simple ditty and grinding a rough stone knife. However, this kind of knowledge is too powerless to reduce the imperfectness of this world. Our ancestor’s capability of solving the difficulties engendered from the natural imperfectness in primitive conditions was rather weak: living standards were extremely poor and savage conflicts among and within tribes were frequent. There has been a long way for mankind to develop from that primitive stage to today’s information society. Now the continual improvement of knowledge has even become the main power of productivity because our modern economy, which drives the subsistence of our society, is largely dependent on innovations, which create more new and useful things to benefit us all.³³

To sum up, the above analyses are combined with five related arguments: first, the material and spiritual world in which mankind lives is wonderful but imperfect and needs to be improved; second, the subjective reason for the imperfectness can be attributed to the limited perceptive ability of the human brain; third, the human brain however has an intelligent ability to perceive, learn and innovate, by which the imperfectness can be gradually overcome; fourth, because of the limited perceptive ability of the human brain, the ultimate purpose of having knowledge is to use it; fifth, due to the intelligent ability of the human brain, knowledge creativity plays a fundamental role in providing more and better knowledge for the public to use.

³¹ Zhu Xi, ‘Da Jiang De-gong’ 2 (jiawu), in *Zhu Xi wenji*, vol. 44.

³² For further details, see Chapter Three.

³³ This is close to a Marxist perspective, which is particularly interested in viewing knowledge as the driving force of economy. See, e.g., Martin Kenney, ‘Value Creation in the Late Twentieth Century: The Rise of the Knowledge Worker’, in *Cutting Edge: Technology, Information, Capitalism, and Social Revolution*, ed. by Jim Davis, Thomas A. Hirschl & Michael Stack, New York: Verso, 1997, pp. 87-102. Also see Peter Drahos, *A philosophy of intellectual property*, Aldershot: Dartmouth, 1996, pp. 95-117. It is noteworthy that China currently puts notable emphasis on knowledge-based economy.

8.3. The cumulative nature of knowledge

Bearing in mind the fundamentally vital role of knowledge, it seems that increasing the quantity and quality of knowledge is essentially important to human society's use of knowledge. But how can knowledge increase? To discuss this matter, it is necessary to recall the double character of the human brain, which naturally has a limited perceptive ability but can intelligently perceive, think, learn and eventually create. When we go through this perceptive progress, we may get new knowledge, which increases the total amount of human knowledge.

To create, it seems that when an individual senses, perceives, and then processes, knowledge appears.³⁴ As Jessica Litman pointed out, while creating many of us always focus on finding concrete form for immaterial impulses, each phrase, tone, or configuration of expression.³⁵ This individualistic understanding of perceiving and in turn creating knowledge is rather popular and in fact has deep historical roots. In Chapter Six, we scrutinized the strong influences of the eighteenth-century English and French publishing industry on shaping the first intellectual property theory, *i.e.*, the Lockean justification. This rhetoric, as Peter Jaszi and Martha Woodmansee have suggested, subsequently fostered the 'romantic understanding of authorship'.³⁶ According to it, authors create something from nothing so works owe their origin to the authors who produce them.³⁷ Such understanding is usually supported by another popular -- yet often true -- image that authors sweat blood to produce them, usually in conditions of ignominy and penury, starving in a garret somewhere.³⁸ This view inclines to construe creativity as independent and separate.³⁹ As the nineteenth-century American legal theorist Lysander Spooner countered, 'Nothing is, by its own essence and nature, more perfectly susceptible of exclusive appropriation, than thought; it originates in the mind of a single individual.'

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³⁴ For further details of this matter, see Oddi, 'The Tragicomedy of the Public Domain in Intellectual Property Law', p. 14.

³⁵ Jessica Litman, 'The Public Domain', 39 *Emory L.J.* 965 (1990), p. 1011.

³⁶ Peter Jaszi, 'Toward a Theory of Copyright: The Metamorphoses of Authorship', 41 *Duke L.J.* 455 (1991), p. 455. Martha Woodmansee & Peter Jaszi (eds.), *The Construction of Authorship: Textual Appropriation in Law and Literature*, Durham, N.C.: Duke University Press, 1994.

³⁷ Litman, 'The Public Domain', p. 965.

³⁸ Jeremy Waldron, 'From Authors to Copiers: Individual Rights and Social Values in Intellectual Property', 68 *Chi.-Kent. L. Rev.* 842 (1993), p. 853.

³⁹ Mark Rose, 'The Author as Proprietor: *Donaldson v. Becket* and the Genealogy of Modern Authorship', 23 *Representations* 51 (1988), p. 51.

⁴⁰ Lysander Spooner, 'A Letter to Scientists and Inventors, on the Science of Justice, and Their Right of Perpetual Property in Their Discoveries and Inventions', in *The Collected Works of Lysander Spooner*, Vol. III, ed. by Charles Shively, Weston, Mass.: M&S Press, 1971, p. 58.

To examine the individualistic and romantic authorship, it is necessary to accentuate the first facet of the double character of the human brain, *i.e.*, the limited perceptive ability, which is the *precondition* of the second facet, *i.e.*, the intelligent perceptive ability. That is to say, the intelligent perceptive ability of the human brain shall not be overemphasized. As has been systematically argued by some Confucian scholars, what we can perceive entirely relies on what we can get from outside.⁴¹ The noted Ming thinker Lü Kun (1536-1618) expressed it quite amusingly: ‘Even a sage cannot sketch the Tai Mountain if during his lifetime he has never visited it, can he?’⁴² This largely indicates that creativity and the increase of knowledge are cumulative rather than self-reliant. In respect of the critical studies of intellectual property, many have noticed the importance of knowledge cumulateness. Edwin Hettinger is one of the first scholars who mention this matter. As he argued, the value of the intellectual object itself derives from the thoughts of many persons, not just the immediate producer.⁴³ However, as Jessica Litman puts it, such a truism has long been a cliché, invoked but not examined.⁴⁴

To further analyze the cumulative nature of knowledge creativity, it is worth ‘returning’ to the very early stage of human evolution when our distant ancestors only knew an extremely slim amount of knowledge, which probably did not very much distinguish them from the chimpanzee. At that stage, overcoming difficulties of the imperfect world could only depend on primary intuition and basic practice. It could be hypothesized that at that time knowledge acquired by primary intuition and basic practice were largely independent. For instance, a simple idea of residing in a cave could be realized by many coincidentally. However, when human society walked away from that very early stage, knowledge started to snowball both quantitatively and qualitatively in that the limited but intelligent perceptive ability of the human brain enabled our ancestors to inspire each other with the facts, ideas, discoveries and even innovations. Civilizations began to emerge and develop with more and more complexity and maturity.

Knowledge cumulateness does not deny the fact that a huge amount of knowledge can be perceived and created independently in different societies. For instance, both pre-

⁴¹ For instance, Wang Fu-zhi and Liu Zong-zhou. For further analysis, see Liu E-pei, *Mengzi dazhuan (Biography of Mencius)*, Beijing: Tsinghua daxue, 1998, p. 308.

⁴² Lü Kun, ‘Bei erzhan shu’, *Quwei zhai wenji*, vol. 3. Cited from Mao Tao, *Lü Kun sixiang yanjiu (Studies of Lü Kun’s Thoughts)*, Beijing: Dangdai zhongguo, 1993, p. 89.

⁴³ As Hettinger argued, the creator always absorbs in the past and recasts and recombines as she works. Edwin C. Hettinger, ‘Justifying Intellectual Property’, 18 *Phil. & Publ. Affairs* 31 (1989), p. 41. Prof. James Boyle heavily criticized the notion of individual knowledge creator. See James Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society*, Cambridge: Harvard University Press, 1996, p. 10. For other similar views, see *e.g.*, Drahos, *A Philosophy of Intellectual Property*, pp. 61-64; Litman, ‘The Public Domain’, pp. 966-67; Wendy J. Gordon, ‘A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property’, 102 *Yale Law Journal* 1533 (1993), p. 1556.

⁴⁴ Litman, ‘The Public Domain’, p. 966.

modern China and Europe independently created similar kinds of new knowledge such as weaving, metallurgy and making boats. This however does not refute the cumulative nature of knowledge because every society has a large population across time and space, accumulating knowledge to inspire further creativity. However, even the summation of the perceptive abilities of an entire society is not omnipotent. Europe did not invent paper while China had been using it for a thousand years. China unfortunately did not invent the steam engine, although some mechanical functions of steam engine might have been realized.⁴⁵ At any rate, when civilizations move on, relying on individual intuition and practice to create sufficient knowledge to overcome the imperfectness, as favoured by the noted twelfth-century Neo-Confucian philosopher Lu Jiu-yuan (1139-1193),⁴⁶ is too simplistic in that individual intuition and practice are unlikely to thoroughly discover many aspects of truth.⁴⁷ As Lu's rival Zhu Xi argued, 'How can we practise without clearly comprehending knowledge? How can we walk if we are sightless?'⁴⁸ To increase the amount of knowledge, we have to gather the existing knowledge and then learn, think, analyze and integrate them, a progress which involves more complicated perception and creativity. Today, innovations in many fields are extremely cumulative, making independent creativity almost impossible and unnecessary.

This matter can be further scrutinized by defining direct and indirect cumulateness of knowledge creativity. The former suggests modifying the existing way of doing things.⁴⁹ In some industries such as biotechnology, computer software and computer hardware, there is a high degree of direct cumulateness, in the sense that each innovator builds on prior developments and discoveries.⁵⁰ Many drugs like insulin and antibiotics have been

⁴⁵ Joseph Needham, 'The Pre-natal History of the Steam-engine', in his *Clerks and Craftsmen in China and the West: Lectures and Addresses on the History of Science and Technology*, Cambridge: Cambridge University Press, 1970, pp. 177-8.

⁴⁶ Lu Jiu-yuan's approach was developed as a response to the challenge of Buddhism to the Song Confucianism. See, e.g., Wang Xin-zhu, 'Ru yu chan: Yang Ci-hu xinxue yu fojia sixiang de guanxi (Confucianism and Zen: On Yang Ci-hu's Doctrine of Mind and Buddhism)', 349 *Zhexue yu wenhua yuekan (Monthly Review of Philosophy and Culture)* (2003), pp. 3-16. Lu targeted the poorly educated as his audience, which may explain his advocacy of a quite easy way of overcoming the imperfectness of the spiritual world. Yu Ying-shi, 'Zhongguo jinshi zongjiao lunli yu shangren jingshen (Religious Ethics and Merchants' Spirits in Early-modern China)', in *Neizai chaoyue zhiru -- Yu Ying-shi xin ruxue lunzhu jiyao (The Way of Internal Transcendence -- Selected Essays of Yu Ying-shi's Studies of Neo-Confucianism)*, ed. by Xin Hua & Ren Jing, Beijing: Zhongguo guangbo dianshi, 1992, pp. 336-39.

⁴⁷ The noted Neo-Confucian scholars Xiong Shi-li and Feng You-lan have systematically studied this matter. See Han Qiang, *Xiandai xin ruxue xinxing lilun pingshu (Comments on the Theories of Nature of Modern Neo-Confucianism)*, Shenyang: liaoning daxue, 1992, pp. 57-61; 93-95.

⁴⁸ For a detailed analysis of the relationship between knowledge and practice, see He Lin, 'Zhixing heyi xinlun (A New Essay on the Unity of Knowledge and Practice)', in *Rujia sixiang de xin kaizhan -- He Lin xin ruxue lunzhu jiyao (The New Development of Confucianism -- Selected Essays of He Lin's Studies of Neo-Confucianism)*, ed. by Song Zhi-ming, Beijing: Zhongguo guangbo dianshi, 1995, pp. 268-98.

⁴⁹ Graham M. Dutfield & Uma Suthersanen, 'The Innovation Dilemma: Intellectual Property and the Historical Legacy of Cumulative Creativity', 4 *I.P.Q.* 379 (2004), pp. 379-83.

⁵⁰ Suzanne Scotchmer, *Innovation and Incentives*, London: MIT Press, 2004, p. 1.

sequentially improved as latter innovators bettered previous technologies.⁵¹ Biomedical research is remarkably cumulative and characterized by information-intensive inputs.⁵² In some high-technology industries, cumulateness is even more sequential. Computer software, for example, can be viewed as a series of inventions ‘piled on top of each other’.⁵³ Of course, direct cumulateness may be comparatively progressive. Traditional industries are typical examples. For instance, many of our modern implements such as hammer and knife made by specialized metals derive from the forms of Stone Age.⁵⁴

In some other cases, however, the cumulateness of knowledge creativity is relatively indirect. New knowledge often borrows ideas from existing knowledge belonging to different catalogues rather than makes sequential or progressive improvement. For example, most molecular biologists may use the basic technique for inserting genes into bacteria, which was pioneered by Herbert Boyer and Stanley Cohen in the early 1970s, for various purposes.⁵⁵ Indirect cumulateness widely occurs in the fields of social science and humanities. For instance, inspiration is drawn from linguistics to study postmodern political science and intellectual property issues can be trans-disciplinarily examined from the perspectives of environmental laws.⁵⁶

Even the intuitive and practical abilities themselves have had become consequences of learning based on cumulative knowledge as human society evolves. The role of perception does not deny a fact that when a type of knowledge is learnt, it needs to be practised so as to comprehend knowledge better. A question immediately follows: the practical aptitude itself, which helps the embodiment of creative ideas and is often independent to that particular amount of skill knowledge, seems to rely on individual activities or even intuitions rather than cumulated knowledge. To borrow an allegory from Mencius, ‘the skilful craftsmen can enable us to know their knowledge of crafts but cannot help us to become skilful’.⁵⁷ However, intuitive and practical abilities may also involve many aspect of cumulative learning. For instance, as compared with individually independent practice, acuity may be better grasped by calmly digesting the knowledge of character training such as those promoted by Confucius.⁵⁸

⁵¹ Suzanne Scotchmer, ‘Standing on the Shoulders of Giants: Cumulative Research and the Patent Law’, 5 *J. Econ. Persp.* 29 (1991), p. 29.

⁵² Clarisa Long, ‘Patents and Cumulative Innovation’, 2 *Wash. U. J.L. & Pol’y* 229 (2000), p. 237.

⁵³ Scotchmer, ‘Standing on the Shoulders of Giants’, p. 29.

⁵⁴ Harvey C. Moore, ‘Cumulation and Cultural Processes’, 56 *American Anthropologist* 347 (1954), p. 348.

⁵⁵ Scotchmer, ‘Standing on the Shoulders of Giants’, p. 29.

⁵⁶ See, e.g., James Boyle, ‘The Second Enclosure Movement and the Construction of the Public Domain’, 66 *Law & Contemp. Probs.* 33 (2003).

⁵⁷ *Jingxin xia, Mengzi*.

⁵⁸ Oddi argues that several elements of the intellectual substructure, including the individual’s memory, rational thinking process (logical thinking), motivation and problem solving ability, are critical to the creative

Some Japanese companies are particularly interested in improving the intuitive and practical abilities of their employees by cumulative learning. As some Japanese scholars have argued, knowledge can be classified as explicit and tacit. Explicit knowledge can be expressed in words and numbers and shared in the form of data, scientific formulae, specifications, manuals, and the like. This kind of knowledge can be readily disseminated across individuals and thus accumulated formally and systematically. Tacit knowledge, on the other hand, is comparatively difficult to be shared through formulas. Subjective insights, intuitions, and hunches fall into this category of knowledge.⁵⁹ To cumulatively nourish tacit knowledge, Japanese companies are often active in promoting interactions among employees; training in intuitive and practical abilities based on cumulative knowledge are increasingly becoming important.⁶⁰ By the confluence of explicit and tacit knowledge, creative sparks and even some entirely unprecedented innovations may be inspired.⁶¹

This analysis is also helpful to examine artistic creativity, which is often viewed as remarkably independent. For instance, a painter who is very poorly educated and even illiterate may have unique intuitions and painting skills, and in turn, a highly creative mind. Some arts such as the avant-garde genre are too intent on expressing themselves originally to enable the public to understanding their artistic meaning.⁶² However, even if the painter is a born genius and has learnt little basic painting skills from other artists, the intuition and practice of an artist involved in painting are much complicated than primitive forms. They are largely stimulated and nourished by the cultural environment, and more generally by the entirety of an artist's social surrounding. These objective elements, which are cumulative results of other creativities, also inform the artists with ample and diverse knowledge, which, as Julie Cohen has argued in an eloquent essay, can influence the ways that people respond to their outside environment; these responses

process. Oddi, 'The Tragicomedy of the Public Domain in Intellectual Property Law', pp. 17-18. However, Oddi did not further point out how these elements are likely to be comprehended and whether they are linked with cumulative knowledge. Yet, practical and intuitive abilities are biologically subject to the development level of human brain. For instance, a mentally disabled person is unable to be at the same practical level as a normal person.

⁵⁹ Ikujiro Nonaka, Noboru Konno & Ryoko Toyama, 'Emergence of Ba: A Conceptual Framework for the Continuous and Self-transcending Process of Knowledge Creation', in *Knowledge Emergence: Social, Technical, and Evolutionary Dimensions of Knowledge Creation*, ed. by Ikujiro Nonaka & Toshihiro Nishiguchi, New York: Oxford Press, 2001, p. 14.

⁶⁰ Ikujiro, Noboru, and Ryoko, 'Emergence of Ba', p. 14.

⁶¹ Giorgio de Michelis, 'Cooperation and Knowledge', in *Knowledge Emergence: Social, Technical, and Evolutionary Dimensions of Knowledge Creation*, pp. 124-42. This surely happens to some other seemingly highly disorder and disunified phenomenon of cumulativeness in science and social science. For further details of the problems of cumulative progress of modern science and sociology, see Mayer N. Zald, 'Progress and Cumulation in the Human Sciences after the Fall', 10 *Sociological Forum* 455 (1995), pp. 455-79; Moore, 'Cumulation and Cultural Processes', pp. 347-57.

⁶² Daniel Bell, *The Cultural Contradictions of Capitalism*, New York: Basic Books, 1976, pp. 33-34.

influence the further development of cultural goods and experiences, including works of creative expression. Artistic creative practice is often messy, free-wheeling, and opportunistic; people seize inspiration where they find it and pursue it wherever it leads.⁶³ Cohen's understanding of the 'outside environment' is also applicable in some literary branches such as poems and novels. As the literary theorist Graham Allen puts it, a literary work is a space in which a potentially vast number of relations coalesce.⁶⁴

Therefore, the distinctive character of knowledge creativity is cumulative, or to borrow a poststructuralist term, intertextual. Intertextuality emphasizes the concept of a 'net', in which the relationship between the knowledge creators and others are reciprocal rather than autonomous.⁶⁵ In the words of the reception theorist Hans-Robert Jauss, knowledge creation is 'a dialectical process'.⁶⁶ It is within an intricately intertextual and interdependent net that individuals get direct, indirect, intuitive or abstract blend and clash. To quote James Boyle, 'we are always already inside'.⁶⁷

However, depicting knowledge cumulativeness as intertextual does not follow that we should underestimate the vital role of creativity. Some poststructuralists criticizing romantic authorship often incline to view knowledge as, in Julia Kristeva's words, 'transformation'.⁶⁸ Creativity seems to be invisible because these transformations are viewed as mainly drawing quotations from innumerable centres of the existing culture,⁶⁹ or anxiously remoulding a previous text.⁷⁰ Many intellectual property scholars, although not all of them are postmodernists or poststructuralists, to a certain degree lean to underrate creativity or are reluctant to scrutinize the extraordinary progress of creating.⁷¹ For many, it seems that we do not really create.⁷²

⁶³ Julie E. Cohen, 'Copyright, Commodification, and Culture: Locating the Public Domain', *Public Law & Legal Theory Working Paper Series*, Georgetown University Law Center, Working Paper No. 663652; Draft 31 Jan 2005. Online at: <http://ssrn.com/abstract=663652> (last visited 11 September 2006), pp. 29-35.

⁶⁴ Graham Allen, *Intertextuality*, New York: Routledge, 2000, p. 12.

⁶⁵ Robert Weimann, 'Textual Identity and Relationship', in *Identity of the Literary Text*, ed. by Mario J. Valdes & Owen J. Miller, London: University of Toronto Press, 1985, p. 289.

⁶⁶ Robert C. Holub, *Reception Theory: A Critical Introduction*, New York: Methuen, 1984, p. 57.

⁶⁷ Boyle, *Shamans, Software, and Spleens*, p. 174.

⁶⁸ Julia Kristeva argued that 'any text is an absorption and transformation of another text.' Julia Kristeva, *Desire in Language: A Semiotic Approach to Literature and Art*, trans. by Leon S. Roudiez ed. & Thomas Gora et al., New York: Columbia University Press, 1980, p. 66.

⁶⁹ Roland Barthes, *Image, Music, Text*, London: Fontana, 1977, p. 146.

⁷⁰ Terry Eagleton, *Literary Theory: An Introduction*, Minneapolis: University of Minnesota Press, 1983, p. 183.

⁷¹ For instance, see Litman, 'The Public Domain'; Carys J. Craig, 'Locke, Labour and Limiting the Author's Right: A Warning Against a Lockean Approach to Copyright Law', 28 *Queen's L.J.* 1 (2002), p. 1.

⁷² The expression of Alan Ryan is more extreme: 'Strictly we *never* create; we rearrange elements in the world, and set the causal agency of the world in motion.' Alan Ryan, 'Self-ownership, Autonomy and Property Rights', in *Property Rights*, ed. by E.F. Paul, F.D. Miller & J. Paul, Cambridge University Press 1994, pp. 241-44.

To examine this matter, it is necessary to revisit the intelligent perceptive ability of the human brain, which enables an individual to capture, organize and mix various and significant amounts of knowledge all together. It is unlikely that two individuals are immersed in an exactly identical surrounding; even if so, each person would still be able to create flexibly or at random. Perhaps the poststructuralists' understanding of 'create' is rather high. But if we construe 'create' as 'to cause differences', surely each leaf on the intellectual trees could be more or less different, or more explicitly, new to each other.⁷³

In sum, the individualistic, romantic authorship seems to be an illusion. Even if we can create new knowledge from nothing, we would create it easier and faster if we relied on existing knowledge. When knowledge perceived by human society increases, the limited perceptive ability of an individual prevents the possibility of unlimited creativities.

Further creativities must be based upon existing knowledge.⁷⁴ As the noted Ming thinker Chen Que (1604-1677) articulated, 'The knowledge of this world is infinite and the brain of one individual is limited... [Knowledge] is impossible to be known without learning, to be comprehended by knowing a little, or to be surmised or exhausted merely by our talent'.⁷⁵ Therefore, the easier and faster we disseminate, access, use and accumulate knowledge, the more likely we perceive and create. Knowledge creativity must be recognized and encouraged but cumulativeness is the underpinning of creativity. As Yuan yuan (1764-1849) wrote in his *Chouren zhuan* (Bibliographies of Astronomers and Mathematicians), 'study is like accumulating firewood and the former must be surpassed'.

⁷⁶

8.4. The non-rivalrous and non-excludable nature of knowledge

Notwithstanding the vital importance of cumulativeness, merely relying on knowledge dissemination or reciprocation cannot sufficiently promote knowledge creativity. In many circumstances, unregulated knowledge dissemination can hinder knowledge creativity. This matter should be understood largely from the perspective of economics.

Generally speaking, to produce new knowledge, first we need to provide mental efforts and often work extremely hard. In addition, to disseminate new knowledge, we normally need to transfer the intangible knowledge into material forms such as machines and books.

⁷³ For the definition of creativity, see Chapter One.

⁷⁴ Craig, 'Locke, Labour and Limiting the Author's Right', p. 23.

⁷⁵ Chen Que, *Daxue bian*. Cited from *Essay Collections for the 2540 Anniversary of Confucius*, pp. 2048-49.

⁷⁶ Yuan Yuan, *Chou ren zhuan* (Bibliographies of Astronomers and Mathematicians), Taipei: shijie shuju, 1962, pp. 1-2.

These activities often involve financial investment, which is spent to sustain the intellectual creators while they are mentally working, to acquire manufacturing facilities, labour forces, advertisements, *etc.*, and consequently to embody the material forms of knowledge. Therefore, there must be some methods by which the investors are likely to reap returns from their investment. In particular, when the commodity economy evolves and knowledge goods are produced and reproduced at a massive scale, investment becomes usually high and therefore deserves careful attention.⁷⁷

How to protect the investment associated with creating new knowledge? This question is difficult to examine from the perspective of knowledge accumulateness, which is irrelevant to investment. We shall turn to other characteristics of knowledge for answers. Knowledge by its nature is an abstract and intangible artifact of the human brain. It is a type of ‘flow resource’, which can be passed from one individual to another.⁷⁸ From an economic perspective, this phenomenon results in two relevant characters of knowledge, *i.e.*, non-rivalry and non-excludability.⁷⁹

Non-rivalry means that knowledge can be used by an infinite number of people in an infinite number of ways without harming the use value of any other person, including the initial producer.⁸⁰ For instance, a novel written by Charles Dickens can be read by millions of people at the same time. There comes a fundamental distinction between the flowing knowledge and the tangible things such as a box of raspberries. Obviously, the possession or consumption of a box of raspberries is rival, meaning that once they have been possessed and especially consumed by one or several people, others are immediately deprived of the possibility to simultaneously acquire and taste them.⁸¹ This in turn results in the problem of excludability. An antique dealer’s possession of a set of china firmly excludes others to physically possess it. In sharp contrast, people cannot practically be excluded from obtaining and reproducing knowledge.⁸² For instance, software can be duplicated in any computer and the original creators are physically unable to control the duplicative processes by tightly holding that very original copy.

Let us return to the argument for the investment associated with knowledge creativity. If the market of knowledge products is only regulated by market forces while a practical or

⁷⁷ OECD Report, *Competition Policy and Intellectual Property Rights*, Paris: OECD, 1989, p. 12.

⁷⁸ Charlotte Hess & Elinor Ostrom, ‘Ideas, Artifacts, and Facilities: Information as a Common-Pool Resource’, 66 *Law & Contemp. Probs.* 111 (2003), p. 131.

⁷⁹ Hettinger, ‘Justifying Intellectual Property’, p. 34

⁸⁰ Paul M. Romer, ‘Endogenous Technological Change’, 98 *J. Pol. Econ.* (1990), pp. 73-74.

⁸¹ Shubha Ghosh, ‘Pills, Patents, and Power: State Creation of Gray Markets as a Limit on Patent Rights’, 53 *Fla. L. Rev.* 789 (2001), pp. 797-98.

⁸² Justin Hughes, ‘The Philosophy of Intellectual Property’, 77 *Geo. L.J.* 287 (1988), p. 315.

legal limit to the theoretically inexhaustible supply of the idea is absent, non-rivalry and non-excludability will flourish. Consequently, with considerably lower costs, free-riders will reap the benefits of reproducing knowledge products created by others.⁸³ By sharing copies, end-users may also affect the size of the knowledge market, particularly in the cases of software, DVDs, and the like. This, in the language of economics, is called the phenomenon of ‘public goods’. Left to an open market without government regulation or special legal protection, investments in ‘public goods’ are uniquely risky and unappealing because market failure will subsequently occur.⁸⁴

There may be a type of non-monetary ‘investment’ associated with the commercialization of the knowledge: the reputations of the knowledge creators such as poets and scientific discoverers, which are ‘invested’ by them to achieve various purposes such as expressing themselves as erudite individuals, gaining popularity and/or attracting potential markets. These knowledge creators may be reluctant to publicize their intellectual fruits if reputation is considered by them as crucial and is likely to be blemished by the non-rivalrous and non-excludable nature of knowledge. For instance, changes made to a poem without the consent of its original author may degrade her reputation, result in her other works being rejected by readers, and even affect her income and career.⁸⁵

To overcome the problem of non-rivalry and non-excludability, as history has revealed, exclusive rights known as intellectual property rights are popularly granted to the knowledge creators to control the flow of their knowledge products. However, as discussed in Chapter One, the abuses of intellectual property may hinder the dissemination and use of knowledge in that users will be restricted to accessing knowledge due to the obstructions of high cost and unavailability.

To sum up, stimulating knowledge creativity cannot merely rely on promoting knowledge dissemination and in turn knowledge cumulativeness. Ironically, too often uncontrolled dissemination of knowledge suffocates knowledge creativity. Therefore, measures must be deployed to overcome this problem. However, institutions such as intellectual property laws, when misused, can hinder the dissemination of knowledge, further creativity, and the ultimate purpose of having knowledge -- using it.

⁸³ Lee Bollinger, ‘Protect this Work of Expression: Clarifying the Unique Economics of Intellectual Property Rights’, 44 *Santa Clara L. Rev.* 1287 (2004), p. 1290. H. Demsetz, ‘Toward a Theory of Property Rights’, 57 *American Economic Review Proceedings* (1967), pp. 347-348.

⁸⁴ Bollinger, ‘Protect this Work of Expression’, p. 1290. Wendy Gordon, ‘An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory’, 41 *Sanford Law Review* (1989), pp. 1343-46.

⁸⁵ However, this aspect should not be exaggerated.

8.5. Polarity: the inherent nature of knowledge

So far, we have argued that knowledge, which is the foundation of the improvement of this world, can only be fostered by promoting both knowledge creation and dissemination and their interactions. However, it seems that the interactions between knowledge creation and dissemination are not smooth but intricate.

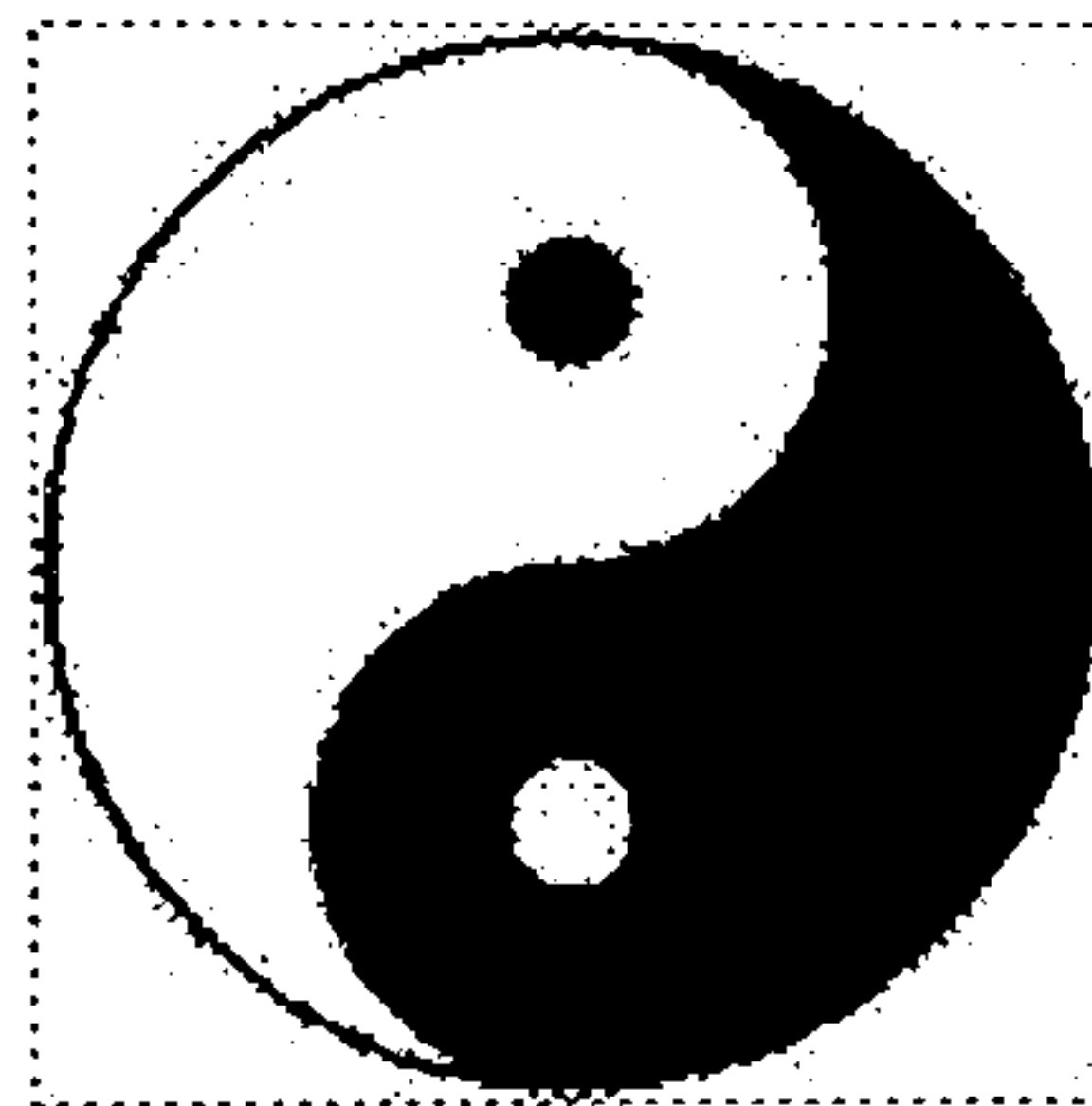
First, due to the limited perceptive ability of the human brain, furthering creativity requires a rich environment of cumulative knowledge, which can only be achieved by promoting knowledge dissemination. Newly created knowledge is often welcomed and easy to be disseminated. When disseminated, accessed and used, the new knowledge will better the use of knowledge and nourish more creativity. In this regard, the relationship between knowledge creation and dissemination can be viewed as ‘inter-nutritional’.

Second, there is a negative side of the interactions between knowledge creation and dissemination. To encourage creativity and its embodiment in the context of commercialization of knowledge products, it is necessary to protect the investment associated with creating and producing knowledge. Unfortunately, due to the non-rivalrous and non-excludable nature of knowledge, uncontrolled knowledge dissemination can notably stifle the attempts to invest in creating new knowledge. To prevent this problem, intellectual property regimes are devised. However, intellectual property rights may restrict the dissemination of new knowledge, further creativity and knowledge use. In this regard, it seems that the relationship between knowledge creation and dissemination is ‘inter-conflicting’.

Hence, there exists an inter-nutritional and inter-conflicting organism, in which knowledge creation and dissemination interact. On the one hand, they benefit each another in an interdependent or intertextual sphere. On the other hand, they conflict within the same sphere; failure to control one side may make another side dysfunctional. How to define this inter-nutritional and inter-conflicting organism? It is apparently quite un-monistic. Nor can it be described as ontologically separate, merely opposing, or incommensurably dualistic.

A further analysis of this phenomenon could be made by drawing inspiration from the Neo-Confucian or Taoist metaphysical concept of *yin* and *yang*, the so-called two primal

opposing but complementary forces found in all things in the universe. *Yin* is the gentle element, representing feminine, earth, *etc*; *yang* is the hard element, standing for masculine, sky, *etc*. These forces are abstract than rather concrete; they are often metaphorized as energy or flow. Chinese philosophy, as the prominent American Sinologist Derk Bodde has articulated, is imbued with the ontological understanding of the two opposing but complementary elements.⁸⁶ This Chinese-style dualism is defined by two distinguished scholars David Hall and Roger Ames as ‘polarity’, which means two organismic events that coexist inherently and symbiotically in a context.⁸⁷ They may conflict but it is a prerequisite that gestating one side requires another.⁸⁸ Such opposing but complementary forces are believed by Neo-Confucianism as the origin of the development of the entire universe.⁸⁹ The concept of *taiji* (Supreme Ultimate) is used to signify the philosophy of polarity. As we can see from the figure below, within the *taiji* circle, each side collides with but also embraces the other.



The movement of the polarity circle is apparently different from the straight-line movement. The result of the straight-line movement is that when the moving point moves forward, it becomes increasingly distant from the starting point. As a result, in the straight-line movement, a cause will never be turned into an effect. In the circular movement, however, reciprocal causality rules because any particular point is a cause as well as an effect.⁹⁰ The movement of the polarity circle is not flat or rotating at a zero rate. When the two sides of the polarity start to interact, quantitative and qualitative changes may occur, resulting in spiral growth or shrinkage.⁹¹

⁸⁶ Derk Bodde, ‘Harmony and Conflict in Chinese Philosophy’, in *Studies in Chinese Thought*, ed. by Arthur F. Wright, Chicago: University of Chicago Press, 1993, p. 54.

⁸⁷ David. L. Hall & Roger T. Ames, *Thinking Through Confucius*, New York: State University of New York Press, 1987, P. 50.

⁸⁸ Wing-tsit Chan, ‘The Individuals in Chinese Religions’, in *The Chinese Mind: Essentials of Chinese Philosophy and Culture*, ed. by Charles A. Moore, Honolulu: East-West Center Press, 1967, pp. 298-300.

⁸⁹ Li Cun-shan, *Zhongguo qilun tanyuan yu fawei (The Inquiry and Discussion about Chinese Qi Argument)*, Beijing: Zhongguo shehui kexue, 1990, pp. 398-97.

⁹⁰ Zhang Qi-cheng, ‘Zhouyi xunhuan lü de tezheng ji pushi yiyi (The Nature of the Circulative Principle of Yi-ching and its Universal Implications)’, 3 *Kongzi yanjiu (Confucius Studies)* 15 (1996), p. 18.

⁹¹ Zhang, ‘The Nature of the Circulative Principle of Yi-ching and its Universal Implications’, p. 18.

Balance is vital to the spiral, healthy and progressive movement from the lower stages towards the higher. The noted scholar Cheng Zhong-ying defines a ‘Golden Rule’ of balance as identifying the inter-conflicting and, in turn, the inter-nutritional elements within the polarity.⁹² Cheng’s approach is deeply rooted in the understanding of the nature of polarity, which is best construed as *zhongdao* (the middle way) by Confucianism.⁹³ The meaning of *zhong* is impartial. As the great Confucian philosopher Ye Shi (1150-1223) articulated, *zhong* is where the two polarity forces should rest; in the status of *zhong*, both the two forces do not occupy the middle but rely on it, by which balance can be achieved.⁹⁴ Polarity-based balance theory plays a central role in Confucianism. Notwithstanding a natural-law tradition of Confucian thinking, Confucianism is more akin to a cluster of balance theories such as the theory of equality of Ronald Dworkin.⁹⁵

It seems that the polarity well portrays the intricate nature of knowledge creation and dissemination, which is inherently conflicting but complementary. First, both polarity and knowledge are abstract or intangible and contain two opposing but complementary elements existing inherently within a symbiotic organism that can interact with each other. Second, the interaction between knowledge creation and dissemination is the same as the circular movement of the polarity: the completion of a new creation is likely to be the threshold of dissemination while the completion of the dissemination is likely to be a very beginning of creativity. Third, the interaction between knowledge creation and dissemination can result in knowledge expansion when they mutually nourish each other, and shrink if they mutually conflict too much. Therefore, balance between knowledge creation and dissemination is vital.

So far, our discussion has been confined to the relationship between knowledge dissemination and creation that we may have lost sight of the ultimate purpose of knowledge, which was revealed when examining the imperfectness of this world: why do we bother about the intricate relationship between knowledge dissemination and creation? To recall, the purpose of knowledge is to use it -- eventually, to improve this world,

⁹² Cheng Zhong-ying, ‘Zhongguo zhexue zhong de hexie hua bianzheng fa (The Harmonized Dialectic in Chinese Philosophy)’, in his *Knowledge and Value*, p. 43.

⁹³ Chen Rong-jie, ‘Rujia zhong de gainian zhi jiantao (An Examination of the Confucian Concept of ‘zhong’), in *Essay Collections for the 2540 Anniversary of Confucius*, pp. 375-88.

⁹⁴ Ye Shi, *Zhongyong, Shuixin bieji*, vol. 7. Cited from Zhang Yi-de, *Ye Shi pingzhuan (Biography of Ye Shi)*, Nanjing: Nanjing daxue, 1994, p. 275.

⁹⁵ Karen Turner, Gao Hong-jun & He Wei-fang (ed.), *Meiguo xuezhe lun zhongguo falü chuantong (American Scholars on Chinese Legal Tradition)*, Zhongguo zhengfa daxue, 1994, pp. 120-22. Dworkin’s theory of equality is a result of his concern that inequality is increasingly becoming obvious in modern society. He argues that every person is entitled to equal concern and respect in the design of the structure of society. To achieve his goal, it is important to keep balance among different types of interests. Ronald Dworkin, ‘Do Values Conflict? A Hedgehog’s Approach’, 42 *Arizona Law Review* 2 (2001).

individuals and our society must be able to access and use the created and disseminated knowledge, especially *new* knowledge.

The significance of using knowledge is not simply consumption. In our society as a whole, a broad definition of polarity should comprise knowledge creation on the one side and three types of knowledge use, i.e., material use, intellectual use and creative use, on another. All of them are within a circular, spiral movement, driving our society to meliorate further. Let us take an example of post-1970s Mainland China when the Socialist leader Deng Xiao-ping outlawed Mao's extremist route of suppressing the intellectuals and re-emphasized the fundamental role of knowledge in bolstering social development. Soon, as compared with Mao's era, economy improved in that new laws and policies were established to attract the transfer of foreign technologies as well as stimulate domestic innovations.⁹⁶ Economic recovery also saw remarkable intellectual changes: not only could more Chinese people afford higher education, but they could also get chances to access knowledge coming from outside. Since the 1990s, digital technology has flourished expeditiously, boosting a tremendous and steady flow of information and knowledge from the developed world, and in turn, a powerful intellectual reform.⁹⁷ The betterments of the standard of living and the intellectual improvement have already invigorated the creative sparks of the Chinese people. Energetic creativity can be seen in almost every corner of the knowledge-related realms. In fact, China is already the highest investor in R&D in the developing world and some high technology based Chinese firms such as Huawei now have globally competitive capabilities in terms of technological innovation.⁹⁸

Therefore, the polarity-alike movement is close to what the postmodernist Rosemary Coombe has defined -- 'dialogism'. In Coombe's view, we should understand ourselves as members of a dialogic community that is not a mere dead weight confronting the individual but rather is both the product and the medium of communicative relations.⁹⁹ In a dialogic community, the improvement of this world is likely to be achieved by

⁹⁶ Duan Ruichun, 'China's Intellectual Property Rights Protection towards the 21st Century', 9 *Duke J. Comp. & Int'l L.* 215 (1998), p. 216.

⁹⁷ However, this intellectual reform, as my other studies will indicate, shall be subject to more examination. It is better to view it as a *start* or an *experiment* of exploration rather than an end of the residues of the Cultural Revolution or a 'success' of westernizing China. To make China develop further, it is essential to criticize some aspects of the current intellectual reform, which are too extremist and Westcentric.

⁹⁸ For China's efforts of stimulating domestic innovations, see John R. Allison and Lianlian Lin, 'The Evolution of Chinese Attitudes toward Property Rights in Invention and Discovery', 20 *U. Pa. J. Int'l Econ. L.* 735 (1999), pp. 775-780; 788-9. Edwin Mansfield, *Intellectual Property Protection, Foreign Direct Investment, and Technology Transfer*, Washington, D.C: World Bank, 1994, p. 224.

⁹⁹ Coombe, 'Objects of Property and Subjects of Politics', p. 1860.

promoting a robust production of creative ideas and respectively the exchanges, distributions and uses of these ideas.¹⁰⁰

The dialogic community is now global. Among its members, the developing countries deserve major attention. To bring them into the knowledge movement, we must start by giving them the rights to access and use knowledge and knowledge products. At least, as will be argued in next chapter, we should make efforts to help them to meet some immediate demands such as employing the latest medical technology to reduce AIDS infection in Africa. Creativity is not dead in the developing countries.¹⁰¹ However, poverty rather than the so-called ‘savage nature’ has left little strength for them to boost education, and in turn, innovation and knowledge-based economy.¹⁰² If we can help, why not?

8.6. Conclusions

The miracles of Jesus or the unimaginable mind power of Buddha are unattainable to the overwhelming majority of our human race. Quite regrettably, the perceptive ability of the human brain is rather limited. As compared with the notably imperfect reality of both the outer and inner world surrounding us, we are initially placed at many significant and even fundamentally fatal disadvantages. Fortunately, thanks to its intelligence, the human brain is able to absorb and in turn to create knowledge to gradually overcome the existing imperfectness of this world. Because knowledge is the only hope for human society to progress, knowledge must be widely disseminated, accessed and used, which means the purpose of knowledge is to use it. But merely relying on basic knowledge only makes little progress, which means knowledge creativity always plays a fundamental role in providing more and better knowledge for the public to use.

Knowledge use and creation have an inherently inter-nutritional and inter-conflicting nature: due to the limitation of perceptive ability, healthy dissemination of knowledge

¹⁰⁰ In the West, the dialogic community is often construed from the perspective of democratic society. See, e.g., Neil Weinstock, ‘Copyright and a Democratic Civil Society’, 106 *Yale Law Journal* 283 (1996), pp. 347-52. Netanel deeply criticises neo-classicist economic view and argues that only a democratic paradigm can explain the role of copyright. However, as far as the developing countries are concerned, the concept of the dialogic society shall not be limited to democratic society.

¹⁰¹ Ruth L. Gana, ‘Has Creativity Died in the Third World? Some Implications of the Internationalization of Intellectual Property’, 24 *Denv. J. Int’l L. & Pol’y* 109 (1995), p. 125.

¹⁰² I am reluctant to quote the argument about the ‘savage’; but it is noteworthy: ‘The savage, it is said, does not invent, he simply borrows his clothing from the animals, his house from the trees and caverns, his food from many sources.’ Otis T. Mason, *The Origins of Invention: A Study of Industry among Primitive Peoples*, London: W. Scott, 1895, p. 19.

nourishes knowledge creativity while continuous creativity betters the quality of the use of knowledge; due to the non-rivalrous and non-excludable nature of knowledge, uncontrolled knowledge use can stifle the attempts at investing in creativity while controls such as intellectual property regimes may restrict the access to new knowledge as well as further creativity.

The inherent inter-nutritional and inter-conflicting nature of knowledge resembles a Chinese ontological concept of polarity. First, both polarity and knowledge are abstract or intangible and contain two opposing but complementary elements existing inherently within a symbiotic organism and can interact with each other. Second, the interaction of knowledge creation and use is the same as the circular movement of the polarity: the completion of a new creation is likely to be the threshold of dissemination and use while the completion of the dissemination and use is likely to be a very beginning of creativity. Third, the interaction between knowledge creation and use can result in knowledge expansion when they mutually nourish each other, and shrink if they mutually conflict too much. Therefore, balance is vital.

CHAPTER NINE

The Justice of Balance: the Rights of Accessing Knowledge and the Rights of Deserving Reward

Sincerely hold the [principle] of balance.

– *Shangshu* (The Classic of History), c. 6th century BC.¹

In last chapter, we tried to relocate the theoretical ‘starting point’ of intellectual property from ‘knowledge creation -- property’ to the investigation of the purpose, role and nature of knowledge *itself*. There are three important findings: first, the ultimate purpose of knowledge is to use it; second, knowledge creativity plays a fundamental role in enhancing the public use of knowledge; third, knowledge use and creation have an inherent nature of inter-nourishment and inter-conflict, which resembles a Chinese ontological concept of ‘polarity’ that requires to be balanced.

This chapter tries to argue that the vision of intellectual property may need to go beyond intellectual property and accommodate the above findings. To promote a balanced inter-nourishment between knowledge creation and use, the use of knowledge, or the ‘access to knowledge (A2K)’,² must be maximized while creativity must be sufficiently rewarded. To reduce their inter-conflicts, unregulated access to knowledge must be avoided and the barriers of intellectual property must be lowered. It seems that intellectual property *per se* should be viewed as an instrument rather than the purpose. It is better to replace the intellectual property regime with a combination of systems based on two categories of rights, *i.e.*, ‘the rights of accessing knowledge’ and ‘the rights of deserving reward’, in which intellectual property will continue to function as a crucial part.

9.1. The rights of accessing knowledge

The public use of knowledge is the ultimate purpose of knowledge. Therefore, it is fundamentally important to maximize access to knowledge and minimize the relevant potential restrictions. This also enriches and underpins the creative environment for

¹ *Da Yu mo* (The Counsels of the Great Yu), *Shangshu* (The Classic of History).

² The notion of A2K can be seed from the A2K Treaty. Several days after I completed the writing of the last two chapters of this research, I heard the news that Yale University will organize an unprecedented conference on A2K in late April 2006. Some of the findings of the conference have now been added in this research. Access To Knowledge Conference, 21-23April, 2006. Online at: <http://research.yale.edu/isp/eventsa2k.html> (last visited 5th October 2006).

further creativity, which can continuously provide improved and enhanced knowledge for the public to use. The modern intellectual property regime is often said to have the competence of tolerating or even promoting access to knowledge in that it places on the property rights of intellectual creators several restrictions. The nature of these restrictions is to set free a certain amount of knowledge to be more easily accessed by society without the control of the property owners or bearing the relatively higher costs occurred due to the barriers of intellectual property rights.

The underpinning of easy access to knowledge is often defined as the common or the public domain. A set of central ideas is never permitted to become private property and is held in a permanent common.³ For instance, everyday ideas, languages, objective realities such as images perceived by our eyes, and our cultural heritage such as books and technologies created before the advent of intellectual property regimes normally belong to the common and therefore cannot be propertized. The common often parallels the emergence of new knowledge. For instance, once a book is published and protected under copyright law, the new ideas generated from that book can be freely used by anyone and therefore expands the common.⁴ The common is increasable also because after a limited period of protection the copyrighted and patented knowledge will be poured into the common and freely used by everyone. Although trademarks are not subject to the restriction of a limited period, they can be thrown into the common once they become generic or their uses cease. In addition, trademarks shall not violate some territories of the commons.⁵ For instance, the common word ‘sausage’ cannot be registered as a trademark of a company producing Yorkshire sausages. Therefore, it seems that the common constitutes the fundamental bedrock of promoting access to knowledge.

As Chapter Seven illustrated, the origin of the notion of the common or the public domain can be traced back to Locke’s argument about tangible property. Locke argues that each individual can convert natural resources into private property by exerting her labour upon them.⁶ It is a premise of propertization that there must be *enough and as good* left for others; otherwise, the propertization is not justified.⁷ Under the *enough and as good* condition, some kinds of materials such as the River Thames or the Tai Mountain should

³ Justin Hughes, ‘The Philosophy of Intellectual Property’, 77 *Geo. L.J.* 287 (1988), p. 320.

⁴ Justine Hughes inclines to define such ideas as belonging to the common. He says: Once a ‘new’ idea has been put into intellectual commerce, once people know about it, it leads to an ‘expansion’ of the common, or of the accessible common. Hughes, ‘The Philosophy of Intellectual Property’, p. 316.

⁵ Tyler T. Ochoa, ‘Origins and Meanings of the Public Domain’, 28 *Dayton L. Rev.* 215 (2002), p. 220.

Stephen L. Carter, ‘The Trouble With Trademark’, 99 *Yale L.J.* 759 (1990), p. 759.

⁶ Hughes, ‘The Philosophy of Intellectual Property’, pp. 299-300.

⁷ John Locke, ‘Second Treatise of Government’, § 27, in *Two Treatises of Government*, ed. by Peter Laslett, Cambridge: Cambridge University Press, 1988. Hughes, ‘The Philosophy of Intellectual Property’, pp. 299-300.

not be privately propertized in that otherwise the majority's just interests will be fundamentally hindered. In addition to the *enough and as good* condition, Locke also sets up a *non-waste* condition, which prohibits the accumulation of so much property that some is destroyed without being used.⁸

It is worth reiterating that Locke's initial purpose in setting up the restrictions on private property rights is to justify the natural rights of the property owners: if the two conditions known as the Lockean Proviso are satisfied, which is not difficult under Locke's proposal, property rights must be justified.⁹ This logic, as I put it, can be defined as a 'propertization-common dichotomy', under which the common is only a 'second-in-time concern'.¹⁰ This dichotomy is deeply rooted in the Lockean justification of intellectual property. It is often suggested that as long as every person is not made *worse* off, *i.e.*, has at least as much opportunity to appropriate ideas as had the first man in the wilderness,¹¹ there are no good reasons for not granting property rights in possessions because people 'have the right to enjoy the fruits of their labour, even when the labours are intellectual'.¹²

As has been discussed elsewhere, in the past several decades, this second-in-time concern of the common has witnessed the continuous and unreasonable expansion of intellectual property rights, which is likely to threaten the common.¹³ This initially attracted David Lange in 1981 to call for more research on the common,¹⁴ because before that period the common had always been implicit in all commentaries on intellectual property and rarely taken centre stage.¹⁵ This follows Jessica Litman's more detailed investigation in 1990.¹⁶ However, even before the mid-1990s, this discussion had largely been confined to the pages of law journals in the West, and not all scholars were equally convinced of its importance; the normative claims advanced by Lange and Litman, and the dynamic

⁸ Locke, *Second Treatise of Government*, § 37, *Ibid.*

⁹ Hughes, 'The Philosophy of Intellectual Property', p. 298.

¹⁰ Steven Wilf, 'Who Authors Trademarks?', 17 *Cardozo Arts & Ent LJ* 1 (1999), p. 4.

¹¹ Hughes, 'The Philosophy of Intellectual Property', p. 325.

¹² Hughes, 'The Philosophy of Intellectual Property', p. 330. Douglas Baird, 'Common Law, Intellectual Property and the Legacy of International News Service v. Associated Press', 50 *U. Chi. L. Rev.* 411 (1983), p. 413.

¹³ Linda R. Cohen & Roger G. Noll, 'Intellectual Property, Antitrust and the New Economy', 62 *U. Pitt. L. Rev.* 453 (2001), p. 456.

¹⁴ David Lange, 'Recognizing the Public Domain', 44 *Law & Contemp. Probs.* 147 (1981), p. 150; footnote 20.

¹⁵ Jessica Litman, 'The Public Domain', 39 *Emory L.J.* 965 (1990), p. 997. However, it should be pointed out that the voice of supporting public interest and intellectual property rights were born together. For early developments of public domain in the 19th century USA, see *e.g.*, Edward Lee, 'The Public's Domain: The Evolution of Legal Restraints on the Government's Power to Control Public Access through Secrecy or Intellectual Property', 55 *Hastings L.J.* 91 (2003), pp. 103-110. For a comment of the history of public interest in England, see Mark Rose, 'Nine-Tenths of the Law: the English Copyright Debates and the Rhetoric of the Public', 66 *Law & Contemp. Probs.* 75 (2003). For a general introduction of the history of supporting public domain, see Diane Leenheer Zimmerman, 'Information as Speech, Information as Goods: Some Thoughts on Marketplaces and the Bill of Rights', 33 *Wm and Mary L. Rev.* 665 (1992), pp. 677-84.

¹⁶ Litman, 'The Public Domain', p. 965.

conception of the public domain that those claims dictated, received relatively little attention from policymakers.¹⁷ In 1996, Peter Jaszi further argued that the ‘defenders of the public interest must begin to develop evidence and arguments that function, at least to some extent, independently of the specific terms of the Patent and Copyright Clause, and carry on the work of explaining why and to whom the common matters’.¹⁸ Now, an increasingly strong voice tends to argue that the robust common has now been enclosed, stolen or perished, and therefore, laws and policies must keep an ample amount of knowledge free in the common.¹⁹

However, many of those inclined to support the common are largely trapped within the propertization-common dichotomy. Lockean scholars tend to construct or re-construct a Lockean-style common. For instance, Wendy Gordon construed the justification of the common as not inflicting harm on others: if a new creation renders the common less valuable, the proviso gives people a privilege to use the new creation to the extent necessary to make themselves as *well off* as they previously were.²⁰ Other protectors of the common, although not explicitly limited to the worse-off condition, often find themselves on the defensive. The Lockean scholar Alfred Yen inclines to justify a strong common. His proposal is to restore a strictly limited natural right, which is firmly addicted to the propertization-common dichotomy.²¹ More popularly, when scholars have explained why it is that intellectual property law should not protect ideas, facts, stock scenes, titles, or characters, they have attempted to explain what aspects of ownable knowledge it is that ideas, facts, titles, or characters lack.²² As a matter of fact, the precise definition of the common is not clear and, as Tyler Ochoa and James Boyle have complained, many just attempt to defensively state that the common is the body of ideas

¹⁷ Julie E. Cohen, ‘Copyright, Commodification, and Culture: Locating the Public Domain’, *Public Law & Legal Theory Working Paper Series*, Georgetown University Law Center, Working Paper No. 663652; Draft 31 Jan 2005. Online at: <http://ssrn.com/abstract=663652> (last visited 11 September 2006), p. 965.

¹⁸ Peter A. Jaszi, ‘Goodbye to All That - A Reluctant (and Perhaps Premature) Adieu to a Constitutionally-Grounded Discourse of Public Interest in Copyright Law’, 29 *Vand. J. Transnat’l L.* 595 (1996), p. 611. Edward Lee also characterized access to the common in culture as a matter of right. Lee, ‘The Public’s Domain’, pp. 103-10.

¹⁹ One of the landmarks in research on the common is the conference held in Duke University in November 2001. The contributed papers have been published in 66 *Law & Contemp. Probs.* (2003). Also available online at <www.law.duke.edu/pd/about.html> Books have also been written to discuss the matter. For instance, see David Bollier, *Silent theft: the Private Plunder of our Common Wealth*, London: Routledge, 2002.

²⁰ Wendy J. Gordon, ‘A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property’, 102 *Yale Law Journal* 1533 (1993), pp. 1561-62.

²¹ Alfred C. Yen, ‘Restoring the Natural Law: Copyright as Labor and Possession’, 51 *Ohio St. L.J.* 517 (1990).

²² Litman, ‘The Public Domain’, p. 995. As Carys Craig argues, Yen’s approach is essentially *consequentialist*. However, as will be argued later, if we can find alternative solutions to replace intellectual property regimes, it is not necessary to solely rely on intellectual property rights or natural rights to promote the common and access to knowledge. Carys J. Craig, ‘Locke, Labour and Limiting the Author’s Right: A Warning Against a Lockean Approach to Copyright Law’, 28 *Queen’s L.J.* 1 (2002), p. 53.

and works that are not subject to intellectual property protection.²³ For instance, to quote Peter Jaszi's typical definition, the common, in the context of copyright, is 'the priceless repository of works that are ineligible for copyright, were created before copyright law existed, have had their copyrights expire, or have been freely given to the public by their authors'.²⁴ This definition is rather succinct: knowledge should either be propertized or stay freely in the common, and we should better do more to help the latter.

Therefore, it seems that many commentators who have gradually or suddenly realized the importance of theorizing the common after Lange called it up may have had some difficulties to evade the influence of the propertization-common dichotomy, which is largely construed from the Lockean perspective. Some of them incline to adhere to Locke's original text and even interpret it in a rather narrow way, which suggests that knowledge can and even must be propertized if doing so does not leave the others worse off. Others may be wary of the potential damage that propertization may make to the common, but they often struggle between propertization and the free common.

Can the propertization-common dichotomy positively satisfy the ultimate purpose of knowledge, which aims at maximizing access to it and minimizing the relevant potential restrictions? Let us recall the three types of access to knowledge: material use, which means the use of knowledge for the purpose of improving physical conditions; intellectual use, which means the use of knowledge for the purpose of improving intellectual and moral conditions; and creative use, which means the use of knowledge for the purpose of creating more new knowledge. Each of them requires less restriction and better accessibility. As compared with access to knowledge, three aspects about the common are noteworthy:

First, is the worse-off condition enough to promote access to knowledge? Generally speaking, the worse-off condition is very difficult to be broken, although it may not be so in some fields such as software and biotechnology where some basic information, e.g., source code and genetic data, are rather scant and propertizing them certainly leave the majority worse off.²⁵ In many other fields, however, there seems to have already existed an infinite amount of unowned knowledge to form the common; the ownable knowledge is often something new, which seemingly encloses barely the existing common. In fact,

²³ Ochoa, 'Origins and Meanings of the Public Domain', p. 217; James Boyle, 'Foreword: The Opposite of Property?', 66 *Law & Contemp. Probs.* 1 (2003), p. 30.

²⁴ Jon M. Garon, 'Normative Copyright: A Conceptual Framework for Copyright Philosophy And Ethics', 88 *Cornell L. Rev.* 1278 (2003), p. 1316.

²⁵ For the difficulties of breaking the common, see Chapter Seven.

the proponents of propertization frequently argue that intellectual property *de facto* increases the common in that it stimulates new knowledge, which will eventually be put into the common after a certain period.²⁶

Unfortunately, access to knowledge cannot be satisfied if no one has been made worse off because the ultimate purpose of accessing knowledge, as suggested by the US Constitution, is to better off the existing condition, or in other words, to overcome the imperfectness of this world. Therefore, the existence of both the common and intellectual property must be able to positively ensure the availability and widespread dissemination of intellectual works and their resulting products. In particular, in the context of the dialogic global community mentioned in Chapter Eight, the living conditions and the development opportunities of the developing countries are likely to be less well off when the intellectual property rights of the West globalize. In fact, as revealed by the *UK Report of the Commission on Intellectual Property Rights*, there is a long way to go if we want to use knowledge to help the world meet the targets of reducing poverty, helping to combat disease, improving the health of mothers and children, enhancing access to education and contributing to sustainable development in the developing countries.²⁷

Second, is keeping a robust common away from propertization enough to promote access to knowledge? It is noteworthy that the tangible common described by Locke is largely undeveloped and created by the ‘spontaneous hand of Nature’, containing land, rocks, animals, and wild fruits.²⁸ In contrast, from the epistemological perspective, the intellectual common is largely composed of developed knowledge that is manifestly the product of the human brain; when human society evolves, knowledge is created, increased, and bettered. The increased and improved knowledge sometimes results in the devaluation of older knowledge if we bear in mind that access to knowledge is closely linked to *new* knowledge, which is more likely to improve this world than the older knowledge.²⁹ For instance, if a new drug for the first time is tested to have the power to cure cancer, human society must be able to access it. Taking the prescriptions of all older

²⁶ Robert P. Merges, ‘A New Dynamism in the Public Domain’, 71 *U. Chi. L. Rev.* 183 (2004), p. 183.

²⁷ Commission on Intellectual Property Rights (UK), *Integrating Intellectual Property Rights and Development Policy – Report of the Commission on Intellectual Property Rights*, London September 2002, p. 6. (Hereafter, *Report 2002*) Online at: http://www.iprcommission.org/papers/word/final_report/reportwordfinal.doc (last visited: 25th November 2005).

²⁸ Benjamin G. Damstedt, ‘Limiting Locke: A Natural Law Justification for the Fair Use Doctrine’, 112 *Yale L.J.* 1179 (2003), p. 1182.

²⁹ Benkler has realized that the popular definitions of the common do not reflect the rights associated with fair use that enables access to new knowledge. Yochai Benkler, ‘Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain’, 74 *N.Y.U.L. Rev.* 354 (1999), pp. 361-62. However, as will be argued later, some measures employed by the existing intellectual property laws such as fair use and compulsory licensing are not sufficient to promote access to knowledge.

drugs to form a vast common does not make sense; they may be helpful for scientists to develop better drugs, but they are sometimes useless and even harmful to the patients. Therefore, it is the price rather than the intellectual common of the patented medicines that will ultimately determine how many will die from diseases such as cancer and AIDS.³⁰ Although ideas emitted from a new book go into the common immediately, many types of new knowledge such as a patented technology cannot be freely used, and often accessing the ideas of a book is restricted by book prices. Emphasizing the common, as the works of Litman and Gordon have shown, has largely been confined to the justification of continuous creativity, which has an immediate demand of accessing the common.³¹ However, creative use is not the only thing and is even not the ultimate purpose of access to knowledge, which must be able to promote material use and intellectual use.

On the contrary, according to the principle of access to knowledge, individuals may be granted certain rights to access new knowledge even if that amount of knowledge is under the protection of intellectual property laws. This justifies some mechanisms of intellectual property laws such as fair use and compulsory licensing. However, the purview of these mechanisms is far from enough. Setting possibly much lower prices in developing countries for intellectual goods such as software, movies, books and medicines created in the developed countries can be well justified because lower prices enable the poorer population in developing countries to have easier access to new knowledge, which improves their material and intellectual conditions and consequently inspires their creativity. According to this, why cannot an American drug producer sell the HIV drug in Africa for only \$1 a pill when the same drug would cost an American \$1,500, if economically possible?³² Non-intellectual property models can also be used. We can even establish the principle of exhaustion of rights for copyrighted works created in the richer countries and translated and reproduced in the poorer provided that these books will not flow back to the richer countries and damage the interests of the original creators. These measures are workable. Normally in a less developed region where people engaging in piracy would not have purchased an original copy even if pirating were not an option,³³ which means it is likely that the market in that region is not the necessary

³⁰ Carlos M. Correa, 'Trips and Access to Drugs: Toward a Solution for Developing Countries without Manufacturing Capacity?', 17 *Emory Int'l L. Rev.* 389 (2003), p. 391.

³¹ Litman, 'The Public Domain', pp. 966-67. Gordon, 'A Property Right in Self-Expression', p. 1556.

³² Lawrence Lessig heavily criticized this property-centred approach, which refuses to save millions who are dying in Africa. Lawrence Lessig, *Free culture: how big media uses technology and the law to lock down culture and control creativity*, New York: Penguin Press, 2004, pp. 260-61.

³³ Stan Liebowitz, *Rethinking the Network Economy*, New York: Amacom, 2002, p. 149.

target for knowledge creators.³⁴ As will be argued later, to minimize the restrictions of access to new knowledge, it is crucial to liberate our vision from the propertization-common dichotomy and look for alternative solutions to replace the existing intellectual property regimes.

Third, can keeping a free and often unregulated common always make access to knowledge easier?³⁵ It is noteworthy that an infinite common of abstract objects sometimes engenders a problem of less availability in that the increases of human knowledge are almost unthinkable, making the human capacity to exploit it at any given moment, as pointed out by Drahos, conditioned.³⁶ Apparently, scholars would be less capable of producing new works and making their own creativity available if they could not use online databases.³⁷ Another issue is that in some intellectual fields such as the biotechnological industries, basic research and product development increasingly depend on non-linear and continuous interactions with each other, and scientific practices and industry business models are evolving to blur the traditional boundaries between the common and the propertized knowledge goods.³⁸

To overcome the disadvantages of an infinite common, as Pamela Samuelson has clearly demonstrated, some of what is valuable in the common might be better utilized if propertized to some degree.³⁹ The degree to which the common can be 'enclosed' shall of course be subject to prudential scrutinization. In general, access must be easy and affordable. Propertization must also be able to encourage creative production by commercial producers.⁴⁰ Moreover, as will be discussed later, alternative models such as compensation system should be employed when necessary and possible.

In addition, the conception of the free common, which claims that intellectual property rights make creation too expensive and create 'choke points' on innovation, sometimes

³⁴ For example, Assafa Endeshaw argued that the main reason for the U.S. strategy of vocal protestation at intellectual property piracy seems to be the greater value that the U.S. wants to obtain in the Chinese market. Assafa Endeshaw, 'A Critical Assessment of the U.S.-China Conflict on Intellectual Property', 6 *Alb. L.J. Sci. & Tech.* 295 (1996), p. 318.

³⁵ I especially agree with Julie Cohen who eloquently argues that distinguishing the common does not necessarily promote further creativity. Cohen, 'Copyright, Commodification, and Culture: Locating the Public Domain', pp. 36-49.

³⁶ Peter Drahos, *A philosophy of intellectual property*, Aldershot: Dartmouth, 1996, p. 51.

³⁷ Pamela Samuelson, 'Mapping the Digital Public Domain: Threats and Opportunities', 66 *Law & Contemp. Probs.* 147 (2003), p. 152. However, the current sui generis protection model may need to be improved to enhance access to knowledge.

³⁸ *The Dynamics of Science and Technology: Social Values, Technical Norms and Scientific Criteria in the Development of Knowledge*, ed. by Wolfgang Krohn, Edwin T. Layton, JR. & Peter Weingart, Boston: D. Reidel, 1978. Clarisa Long, 'Patents and Cumulative Innovation', 2 *Wash. U. J.L. & Pol'y* 229 (2000), p. 233.

³⁹ Samuelson, 'Mapping the Digital Public Domain', pp. 147-48.

⁴⁰ Benkler, 'Free as the Air to Common Use', p. 400.

can make the relevant argument pedantic and even perilous. Too often it is argued that indigenous knowledge is part of the ‘intellectual commons’ because it constitutes only unoriginal knowledge,⁴¹ and represents only historical data collected from time immemorial in an incremental fashion.⁴² This understanding of the free common is popularly voiced by ‘Big Pharma’ and multinational agricultural enterprises against the local community’s rights in traditional knowledge and genetic resources.⁴³ From the perspective of accessing knowledge, however, if granting some limited rights to the indigenous people who live in extremely poor conditions and now happen to have a golden opportunity to profit from their traditional knowledge is necessary and will not dramatically affect accessibility of the richer, why should we be restrained by the ‘romantic’ common?

Therefore, limiting our vision to the propertization-common dichotomy cannot sufficiently satisfy the ultimate purpose of knowledge. Access to knowledge cannot be satisfied merely by not leaving people worse off. Nor can it be effectively promoted by solely relying on a gigantic and free common. The common is likely to prevent us from thinking about access to new knowledge as well as alternatives to intellectual property. Sometimes, it goes too far, neglecting and even jeopardizing the necessary rights that should be enjoyed by knowledge creators.

I think we should better forget about the problematic property-oriented common for a while and focus straightforwardly on the proposition of access to knowledge, which must be maximized with minimized restrictions. Of course, the common is fundamentally important to access to knowledge. We need to keep a healthy common, which in principle is unprotectable by any legal institutions. Facts, languages, basic ideas and even some fundamental scientific discoveries fall into the catalogue of this common. When intellectual property protection of knowledge expires, the knowledge must be thrown into the common. We may also need to use measures other than intellectual property to shorten the period of propertized knowledge and swiftly send them into the common. However, keeping knowledge in the common is not overwhelmingly important because merely maintaining a robust common does not inevitably follow cheaper and easier access to knowledge. Sometimes, we need to propertize the common to some degree so as to promote better access. In other circumstances, we need to give the knowledge users

⁴¹ Christine Haight Farley, ‘Protecting Folklore of Indigenous Peoples: Is Intellectual Property the Answer?’, 30 *Conn. L. Rev.* 1 (1997), p. 18.

⁴² Peter Drahos, ‘Indigenous Knowledge and Duties of Intellectual Property Owners’, 11 *Intell. Prop. J.* 179 (1997), p. 182.

⁴³ Anupam Chander & Madhavi Sunder, ‘The Romance of the Public Domain’, 92 *Calif. L. Rev.* 1331 (2004), p.1345.

certain rights to access new knowledge even if the knowledge is still under the protection of intellectual property laws. At any rate, the core principle of access to knowledge is using knowledge to improve our world rather than simply to maintain the worse-off condition and then propertize knowledge as much as we can.

It is worth mentioning Lawrence Lessig's concept of 'common', which starts from less restriction or freedom rather than the propertization-common dichotomy.⁴⁴ According to Lessig, 'accessing the common is not necessarily zero cost; but if there is a cost, it is a neutrally imposed, or equally imposed'.⁴⁵ As will be discussed below, this research does not follow Lessig's approach of rejecting the reasonableness of intellectual property; but his logic is insightful: the discussion of the common must focus on the costs and other restrictions to the maximum of access to knowledge and meanwhile keep balance between access and creativity; access to knowledge does not always mean galloping in the Wild West but should be regulated when necessary.

The last but most important thing to note is that the rights of accessing knowledge should be understood, to echo Lange, as individual rights rather than a vague definition of the public interest.⁴⁶ Yet, here the rights of accessing the common suggested by Lange are replaced by the 'rights of accessing knowledge'.⁴⁷ Such rights must be enjoyed by every individual because, to borrow the logic of the contemporary Hobbesian liberal theory, the 'public' is a collection of autonomous individuals, each acting out of self-interest.⁴⁸ Such rights, as compared to the rights enjoyed by the knowledge creators, should be equally strong because they serve the purpose of knowledge and therefore are 'demanded by justice'.⁴⁹

⁴⁴ Lawrence Lessig, 'The Architecture of Innovation', 51 *Duke L. J.* 1783 (2002), p. 1788.

⁴⁵ Lawrence Lessig, 'Code and the Commons, Keynote Address at the Conference on Media Convergence', held at Fordham University Law School (Feb. 9, 1999). Online at: <http://cyber.law.harvard.edu/works/lessig/fordham.pdf> (last visited 2nd September 2005). It is noteworthy that James Boyle inclines to adopt Lessig's notion of the common because Lessig does not follow the propertization-common dichotomy. James Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', 66 *Law & Contemp. Probs.* 33 (2003), p. 64.

⁴⁶ Lange, 'Recognizing the Public Domain', p. 147; 177.

⁴⁷ It is noteworthy that Diane Leenheer's understanding of each individual's rights of using knowledge is very close to what I mean by the rights of accessing knowledge. As Leenheer argued, information, ideas, facts, and concepts -- that vast array of human knowledge and expression -- are not available to the public merely as a customary matter; their use is presumptively and powerfully protected by the Bill of Rights. Zimmerman, 'Information as Speech, Information as Goods', p. 665. However, using human rights to justify the rights of accessing knowledge should be subject to further academic explorations.

⁴⁸ T. Hobbes, *Leviathan*, Everyman's Library ed. 1983, pp. 63-66; 104-10.

⁴⁹ As early as 1996, Peter Drahos explicitly put forward an argument for information justice. Drahos, *A philosophy of intellectual property*, pp. 117-97. At the Yale Information Society Project Access to Knowledge Conference, Jack Balkin narrated the essence of access to knowledge as a demand of justice. Jack Balkin, 'What is Access to Knowledge?', presented at the 'Yale Information Society Project Access to Knowledge Conference', Friday, April 21, 2006. Online at: <http://balkin.blogspot.com/2006/04/what-is-access-to-knowledge.html> (last visited: 5th December 2006).

9.2. The rights of deserving reward

So far, our analysis has concentrated on access to knowledge. However, according to the polarity nature of knowledge, it is equally and fundamentally important to promote creativity, which plays a crucial role in improving the quality and quantity of what we can access. There are two basic criteria that must be satisfied: first, minimize restrictions on access to knowledge such as those imposed by intellectual property regimes so as to maximize access to knowledge and provide a continuous resources of innovation; second, sufficiently reward the knowledge creators, which means that it is important to prevent creativity from being stifled by unregulated access to knowledge as less creativity will eventually impair the better use of knowledge. As compared to the ‘rights of accessing knowledge’, the knowledge creators should equally have the ‘rights of deserving reward’, which is also demanded by justice. Under the rights of deserving reward, a combination of reward systems, which is not merely limited to intellectual property regime, should be applied.

The desert-reward argument proposed in this chapter is not particularly linked to mental labour, which is often used to justify intellectual property rights. Lawrence Becker has aptly described Locke’s view of labour as a ‘proposal that labour is something unpleasant’.⁵⁰ However, idea-making is not always painful; it could just as easily in some cases be regarded as a neutral activity or even a pleasant activity.⁵¹ In addition, some intellectual creative progress does not dramatically require mental labour. For instance, a talented lyricist can instantly produce an exceptionally beautiful poem and derive great pleasure from doing so. According to the desert-reward argument, it does not matter whether the process of creativity is pleasant or relevant to labour; knowledge creators deserve reward because they contribute newness, which of course may vary significantly, to improve the quality and quantity of what we can access. In addition, even if mental labour exists and is painful, it does not immediately follow that we need intellectual property rights if intellectual property rights are otherwise unnecessary or there exist alternative models.

It seems that the desert-reward argument proposed here is akin to another interpretation of Locke's labour justification, which can be called the ‘labour-desert’ or ‘value-added’ theory. The labour-desert theory asserts that labour often creates social value, and it is

⁵⁰ Lawrence Becker, ‘The Labor Theory of Property Acquisition’, 73 *J. Phil.* 653 (1976), p. 655.

⁵¹ Hughes, ‘The Philosophy of Intellectual Property’, p. 304.

this production of social value that ‘deserves’ reward, not the labour that produced it.⁵² However, there is a fundamental difference: the desert-reward argument only justifies reward per se while Locke’s labour-desert theory justifies no more than intellectual property. Market value of the knowledge product is not what a producer’s labour naturally entitles her to. So a reward theory should not establish a property right or exclusive right to receive the full market value of the resulting product.⁵³ Hence, the labour-desert theory is a *non sequitur*. As Becker has questioned bluntly, ‘under what conditions can I deserve to have such powers over you by virtue of my labour?’⁵⁴ It seems that nothing about what intellectual property law ought to be immediately follows the labour-desert or value-added arguments because there are plausible alternatives to intellectual property rights. We can, for example, even reward the knowledge creators by publicly expressing admiration or ensuring author-identification -- intellectual products can be named after their inventors, and the author-identification can be kept alive by convention, without resorting to property rights.⁵⁵ Therefore, desert-reward only implies various types of ‘reward’ and does not immediately follow intellectual property models.

The strongest and most widely appealed to justification for intellectual property is a utilitarian argument based on providing incentives. According to this ‘incentive theory’, promoting the creation of valuable intellectual works requires intellectual labourers being granted property rights in those works.⁵⁶ For commercial project involving heavy investments like drug research and development, the incentive may necessarily be strong patent protection. However, for writing a social science report supported by public funding, the incentive could be admiration, one-off payment, better career opportunity, or even the funding itself. The demand for incentive can even vigorously exist in non-monetary circumstances. This is particularly true with regard to cyber-authors such as those who voluntarily provide collaborative writing for Wikipedia. Internet is a unique dialogic community, which is unthinkable in traditional media such as journals and books. The process of composition, sharing and conversation constitutes an interactive cultural world in which authors are pleased by the creative process itself and in turn spiritually stimulated by responses, praise, and sometimes, reputation. The desert-reward argument is not particularly associated with the incentive theory: incentives can only be construed as requiring reward, which often varies, rather than be an inevitable reason for granting

⁵² *Ibid.*, p. 305.

⁵³ Edwin C. Hettinger, ‘Justifying Intellectual Property’, 18 *Phil. & Publ. Affairs* 31 (1989), pp. 38-39.

⁵⁴ Lawrence C. Becker, ‘Deserving to Own Intellectual Property’, 68 *Chi.-Kent. L. Rev.* 609 (1993), p. 622.

⁵⁵ Becker, ‘Deserving to Own Intellectual Property’, pp. 622-23.

⁵⁶ Hettinger, ‘Justifying Intellectual Property’, pp. 47-48. Ruth Gana Okediji, ‘Perspectives on Globalization from Developing States: Copyright and Public Welfare in Global Perspective’, 7 *Ind. J. Global Leg. Stud.* 117 (1999), p. 155.

intellectual property; even if creativity needs no incentive at all, the creator still deserves reward.

However, the desert-reward argument should not be interpreted as devaluating the significant roles that mental labour and incentives play in producing new knowledge. In many cases, deserving reward merges with encouraging intellectual labour and providing incentives because most creative works result from very hard mental labour and require sufficient incentives, both spiritually and financially. The desert-reward argument is also not against the practice of intellectual property protection. As illustrated in previous chapters, producing new knowledge may involve heavy investment, which is often likely to be jeopardized by unauthorized copying due to the non-rivalrous and non-excludable nature of intangible knowledge. Our ancestors in both China and Europe realized the inevitability of intellectual property practice for a long time.⁵⁷ In many cases, intellectual property rights must be strong and effective.

For a while, it is better to forget about not only the property-centred common but also the illusive labour theory and incentive theory, which are popularly used to justify the unreasonable expansion of intellectual property. The rights of deserving reward do not lead inevitably to intellectual property rights; *any* method that can properly reward the knowledge creators as well as promote access to knowledge is justifiable. The desert-reward argument itself only justifies ‘should’ rather than ‘how’: the latter is a topic for modern economics, which must aim at providing a well-functioning combination of reward systems to sufficiently promote creativity, and more importantly, the ultimate purpose of access to knowledge – to use it.

A combination of reward systems rather suggests that we should view reward as having a ‘sacred’ meaning but view intellectual property as an instrument. According to institutionalism, intellectual property practice can only be justified when exclusive rights granted to knowledge creators are essential and necessary and do not hinder access to knowledge. Drahos initially suggested an instrumentalist understanding of intellectual

⁵⁷ Please see Chapter Four for more details. For discussion on the relation between investment and intellectual property, see *e.g.*, Hughes, ‘The Philosophy of Intellectual Property’, p. 291. Samuel E. Trosow, ‘The Illusive Search for Justificatory Theories: Copyright, Commodification and Capital’, 16 *Can. J.L. & Juris.* 217 (2003). Lee Bollinger, ‘Protect this Work of Expression: Clarifying the Unique Economics of Intellectual Property Rights’, 44 *Santa Clara L. Rev.* 1287 (2004), p. 1290.

property in 1996.⁵⁸ Graham Dutfield also explicitly advocated institutionalism to treat intellectual property rights as state-regulated institutions rather than natural rights.⁵⁹

An instrumentalist perspective is constructive to re-examining the existing intellectual property regime, which is under fierce attack for its unreasonable expansion. It enables us to seek alternative solutions that has reward function similar to, or even superior to, that of intellectual property and meanwhile reduces costs and other barriers to access to knowledge. As early as in 1989, Edwin Hettinger reminded us that it is important ‘to think more openly and imaginatively about the alternative choices available to us’ for rewarding knowledge creators.⁶⁰

Many contemporary scholars are keen to seek alternative solutions.⁶¹ In addition to models such as non-monetary recognition and one-off payment which can be used in circumstances where mental and financial investments are insignificant, scholars also argue that in some other circumstances the seemingly necessary intellectual property regime can even be replaced by alternatives.⁶² For instance, a reward system based on sales-related information could be superior to patent protection;⁶³ non-copyright-based incentives such as lead-time, contracts, network effects, and sales in advance of entering the market are likely to be more important catalysts for rewarding knowledge creativity.⁶⁴

Some scholars have been enthusiastic about devising exquisite alternative models to replace the current intellectual property systems. Lawrence Lessig has provided a tripartite-layer legal model to transform intellectual property from a property regime into a liability regime with an ultimate goal to preserve and enrich a digital intellectual common of freely shared ideas.⁶⁵ William Fisher has designed for the authors of audio or video recordings an administrative compensation system, by which a particular

⁵⁸ Drahos, *A philosophy of intellectual property*, pp. 199-228.

⁵⁹ Graham Dutfield, *Intellectual Property Rights and the Life Science Industries: A Twentieth Century History*, Burlington, VT: Ashgate Publishing Company, 2003, pp. 33-44.

⁶⁰ Hettinger, ‘Justifying Intellectual Property’, pp. 51-52.

⁶¹ For an interesting economic analysis arguing that the most commodified solution is not necessarily the best one, see Julie E. Cohen, ‘Lochner in Cyberspace: The New Economic Orthodoxy of ‘Rights Management’’, 97 *Mich. L. Rev.* 462 (1998).

⁶² For instance, see Garon, ‘Normative Copyright’, p. 1281. Adam D. Moore, ‘A Lockean Theory of Intellectual Property’, 21 *Hamline L. Rev.* 65 (1997), p. 74.

⁶³ Steven Shavell & Tanguy Van Ypersele, ‘Rewards Versus Intellectual Property Rights’, XLIV *The Journal of Law and Economics* (2001), pp. 525-47.

⁶⁴ Michael A. Carrier, ‘Cabining Intellectual Property through a Property Paradigm’, 54 *Duke L.J.* 1 (2004), p. 35. For an early criticism of the necessity of copyright in encouraging the creation of books, see Stephen Breyer, ‘The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs’, 84 *Harv. L. Rev.* (1970), p. 281; 282; 294. For a contract-based model, see Moore, ‘A Lockean Theory of Intellectual Property’, p. 65. Carrier, ‘Cabining Intellectual Property through a Property Paradigm’, p. 36.

⁶⁵ Lawrence Lessig, *The Future of Ideas: the Fate of the Commons in a Connected World*, New York, N.Y.: Random House, 2001, pp. 241-50.

government agency would raise the money necessary to compensate the authors through a tax -- most likely, a tax on the devices and services that consumers use to gain access to digital entertainment.⁶⁶ Databases have attracted much attention. It is often argued that the funding agencies, universities, and scientific organizations must agree to a basic set of ground rules, with the goal of preserving the common for research purposes without impeding institutional actors or single researchers from enjoying the benefits of appropriate commercialization in the private sector.⁶⁷ Some alternative models such as the Creative Commons to a certain extent work well.

Alternative solutions are deemed to be workable because scholars believe that overcoming the cost problem generated by the non-rivalrous and non-excludable nature of knowledge does not necessarily lead to the intellectual property model. A common argument is that many propertized knowledge products are *de facto* created under public funding rather than commercial investment, which makes intellectual property's role of recovering investment trivial. In the fields of technological innovation, it has been argued that the major studies undertaken in the last half century have been consistent in showing that patents are the primary appropriability mechanism in, at most, only a few industries.⁶⁸ Fisher employed several economic models to analyze pharmaceutical, biotechnology, aviation, and software industries, suggesting that intellectual property is not overwhelmingly the best.⁶⁹ Instead, firms in these industries regard market-based incentives as more effective catalysts for innovation. A significant non-patent incentive to innovate is the advantage from being the first to enter a market -- in other words, a 'market pioneer'.⁷⁰ Jerome Reichman's detailed analysis shows that a compensatory liability regime is better than property-based rules. The latter return to the first comer too

⁶⁶ William W. Fisher, *Promises to Keep: Technology, Law, and the Future of Entertainment*, California: Stanford University Press, 2004, Chapter 6.

⁶⁷ J. H. Reichman & Paul F. Uhler, 'A Contractually Reconstructed Research Commons for Scientific Data in a Highly Protectionist Intellectual Property Environment', 66 *Law & Contemp. Probs.* 315 (2003), p.325.

⁶⁸ Carrier, 'Cabining Intellectual Property through a Property Paradigm', pp. 38-39. For further information, see e.g., C.T. Taylor & Z.A. Silberston, *The Economic Impact of the Patent System: A Study of the British Experience*, Cambridge: Cambridge University Press, 1973, pp. 201-07; Edwin Mansfield, 'Patents and Innovation: An Empirical Study', 32 *Mgmt. Sci.* 173 (1986), p. 174.

⁶⁹ William Fisher, 'Intellectual Property and Innovation: Theoretical, Empirical, and Historical Perspectives', prepared for the Programme Seminar on Intellectual Property and Innovation in the Knowledge-based Economy, May 2, 2001, The Hague. Online at <http://cyber.law.harvard.edu/people/tfisher/Innovation.pdf> (last visited 5th June 2006). Fisher also pointed out that the roles of government or public organizations such as academic institutions should be considered. Governments can engage in technological innovation themselves; they can also provide grants, funding or *post-hoc* prizes. For a study on the governmental roles involving knowledge creativity, see Patrick Croskery, 'Institutional Utilitarianism and Intellectual Property', 68 *Chi.-Kent. L. Rev.* 631 (1993).

⁷⁰ Carrier, 'Cabining Intellectual Property through a Property Paradigm', pp. 38-39; William T. Robinson et al., 'First-Mover Advantages from Pioneering New Markets: A Survey of Empirical Evidence', 9 *Rev. Indus. Org.* 1 (1994), p. 6.

little or too much, impede follow-on developments, ignore the significant contributions of the public domain, balkanize the knowledge base, and increase transaction costs.⁷¹

However, seeking alternative solutions should not be understood as naturally bearing animosity towards intellectual property and emotionally wanting to abolish it without much more detailed and prudential investigations. Some arguments against intellectual property should be subject to further scrutiny. For instance, a popular argument about the investment of knowledge products is that the cost of reproducing them for an additional user is not always expensive, although there are communication costs.⁷²

Software is a frequently cited example. It is often said that the marginal cost of a new copy of Microsoft Windows is the cost of the blank disk, the human labour required to copy it, and the cost of the manuals, packaging, and distribution of the box itself to consumers. Online distributed software has essentially no marginal cost, as it can be downloaded by consumers on their own time, albeit with some commitment to acquiring computer resources by the supplier.⁷³ Some scholars such as the economist Michael Perelman often use the low marginal cost of reproduction as a scathing critique of intellectual property.⁷⁴ However, marginal cost is not the only cost involved in knowledge production. Unusually there are high pre-inventive fixed costs, which deserve equal attention.⁷⁵ In some industries, intellectual property regimes must prevail over alternative models.

We may have to view some attempts at seeking alternative solutions as experiments rather than panaceas. For instance, the reason that the open source and free software developers may well afford to choose code precedents solely on the basis of functional criteria is by and large that they are not subject to competitive constraints. Stallman's copyleft philosophy purporting that not all human action is driven by the desire to make money can only be true in some cases.⁷⁶ For entirely market-based incentives, Stallman's free software movement may not be a viable substitute.⁷⁷ As Fisher points out, none of the existing solutions is perfect; each one has both advantages and disadvantages.⁷⁸

⁷¹ Jerome H. Reichman, 'Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation', 53 Vand. L. Rev. 1743 (2000), pp. 24-53.

⁷² Hettinger, 'Justifying intellectual property', p. 34.

⁷³ Mark A. Lemley & David McGowan, 'Legal Implications of Network Economic Effects', 86 Cal. L. Rev. 479 (1998), p. 484.

⁷⁴ Michael Perelman, *Steal this Idea: Intellectual Property Rights and the Corporate Confiscation of Creativity*, New York: Palgrave, 2002, p. 165.

⁷⁵ Lee Bollinger criticized Perelman's view. See Bollinger, 'Protect this Work of Expression', pp. 1291-92.

⁷⁶ Richard Stallman, *What is Copyleft?*, Online at: <http://www.gnu.org/copyleft/copyleft.html> (last visited 5th December 2005).

⁷⁷ For a comment, see Mathias Strasser, 'A New Paradigm in Intellectual Property Law?: The Case Against Open Sources', 2001 Stan. Tech. L. Rev. 4 (2001), pp. 83-85.

⁷⁸ Fisher, 'Intellectual Property and Innovation'.

Perhaps we should eventually rely on further technological breakthroughs to overcome the disadvantages of non-rivalry and non-excludability, minimize the costs of creating new knowledge, and in turn, provide a better institution for those who have the sacred 'rights of deserving reward'. At the current stage, however, we should not merely focus on alternatives while ignoring the positive functions of intellectual property, which nonetheless must not be unreasonably expanded.

It is noteworthy that the instrumentalist approach of intellectual property constructed here is solely based on the particularities of knowledge discussed in the last chapter. To a great extent, it is not suitable for tangible property. As we indicated, the ubiquitous influence of Locke makes it overwhelmingly popular to criticize intellectual property by criticizing tangible property. For instance, Boyle takes an environmentalist perspective to criticize the side effects of property;⁷⁹ Christopher May inclines to deny the justification of intellectual property by starting from an entire devaluation of the notion of property per se.⁸⁰ These arguments are very insightful. However, it would be better to scrutinize more deeply the unique particularities of knowledge itself. Although tangible property rights are similar to intangible knowledge in terms of the necessity of limits,⁸¹ there exists a fundamental incompatibility between the non-rivalrous knowledge and the rivalrous physical resources.⁸² These physical resources, as Lessig's formulation suggests, if open to all, would be depleted by the consumption of all.⁸³ This depletion, which the biologist Garrett Hardin famously termed 'the tragedy of the commons', needs a system of control to assure that the resource is both produced and not overused.⁸⁴ Obviously, the clear-cut physical property system has been proved not to be the worst one. It is human nature that, as Margaret Radin argues, to be a person an individual needs some controls over physical resources in the external environment. Intuitively most people possess certain objects they feel are almost part of themselves.⁸⁵ Once the objects such as houses, money and

⁷⁹ Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', p. 33.

⁸⁰ Christopher May, *A Global Political Economy of Intellectual Property Rights: The New Enclosures?*, London: Routledge, 2002, pp. 16-45.

⁸¹ Numerous doctrines such as adverse possession, eminent domain, easements, zoning, and the Rule against Perpetuities bespeak the limits on absolute tangible property rights. Carrier, 'Cabining Intellectual Property through a Property Paradigm', p. 5.

⁸² For early discussions about the incompatibility of intellectual property system with physical property system, see Boudewijn Bouckaert, 'What is Property?', 13 *Harvard Journal of Law & Public Policy* 775 (1990); Tom Palmer, 'Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects', 13 *Harvard Journal of Law & Public Policy* 867 (1990).

⁸³ Lawrence Lessig, *The Future of Ideas*, pp. 19-22. Tom G. Palmer construes the rival nature of tangible goods as scarcity. Tom G. Palmer, 'Are Patents and Copyrights Morally Justified? The Philosophy of Property Rights and Ideal Objects', in *Copy fights: the future of intellectual property in the information age*, ed. by Adam Thierer and Wayne Crews, Washington, D.C.: Cato Institute, 2002, pp. 78-79.

⁸⁴ Garrett Hardin, 'The Tragedy of the Commons', 162 *Science* (1968), p. 1243.

⁸⁵ Margaret Jane Radin, 'Property and Personhood', 34 *Stan. L. Rev.* 957(1982), p. 957.

land are not firmly secured, as the ancient Confucianist Mencius argued, people will not have constancy of purpose [to be good and moral].⁸⁶

On the contrary, in the field of knowledge production, I would like to argue that the real object knowledge creators want to possess is, in addition to moral encouragement, monetary *reward*, which is a physical profit and could be secured by building a matrix of reward system instead of a narrowband of intellectual property. After all, we should be prudential to idealistically embroil physical property in the quarrel of intellectual property because the former is, and will continue to be, the material foundation stone of human civilization.⁸⁷

9.3. The justice of balance revisited

The above analysis seeks a balanced theoretical point that may effectively promote the inter-nourishment between access to knowledge and knowledge creativity. Its main proposal is to maximize access to knowledge as far as we can while sufficiently rewarding knowledge creativity. It should not be understood as a variation of some popular views of criticizing intellectual property, which often tend to exaggerate the virtue of free access to knowledge and the evil of appropriation.

It is worth iterating the findings in the last chapter: improving the inter-nutritional relationship between access to knowledge and knowledge creativity while reducing their inter-conflicts are both crucial. Only maximizing access to knowledge cannot promote social progress, which fundamentally relies on continuous creativity; creativity must be effectively stimulated but it should not hinder access to knowledge. Therefore, it is equally necessary to reduce the obstacles to access to knowledge and knowledge management systems. In this regard, the justice of the rights of accessing knowledge and the rights of deserving reward can only be valid when balance is satisfied and balance itself should also be regarded as a demand of justice.

The extent to which the balance issue is vital is often subject to the level of inter-nutrition and inter-conflicts. For instance, the art of painting is less cumulative while gene technology is highly cumulative, and the latter requires more attention from the principle of balance; compared with traditional industries, industries such as software and

⁸⁶ *Teng wengong shang, Mengzi.*

⁸⁷ For a discussion of different attentions paid to tangible property and intellectual property, see James V. Delong, 'Defending Intellectual Property', in *Copy fights*, pp. 17-26.

biotechnology may more necessarily require alternatives to avoid the possible side effects of the existing intellectual property expansion. More importantly, it is noteworthy that the balance issue and especially the efforts to seek alternatives are discussed largely in the context of the North-South relationship in that conflicts regarding intellectual property notably exist among them. Knowledge transfer from the developed countries to the developing countries must enjoy more freedom and flexibilities that our global society allows while piracy should be strictly prohibited if the investors would be heavily damaged or the costs of the knowledge products are bearable by the average consumer of a country.

Another obvious example is trademark. As suggested by Chapter Six, the essential function of trademark is not to stimulate knowledge creation and dissemination but to identify products. The identification function of trademark does not follow the inter-nutritional and inter-conflicting polarity between consumer-users and trademark owners; in fact, only absolute exclusive rights can protect the public interest. Of course, many theoretical suggestions discussed in last chapter are applicable to trademark. Trademark is a fundamental part of knowledge, on which people rely to improve daily life. That human society relies on the identification function of marks is also subject to perceptive reasons. Creativity occurring in designing trademarks is governed by the polarity of knowledge. Trademark should also not affect freedom of speech and other cultural development, which foster dialogues, dissemination of knowledge and cumulative creativity.⁸⁸ However, trademark's identification function itself is entirely different from literary and technological knowledge and therefore is not concerned by the balance of rights of accessing knowledge and the rights of deserving reward proposed here.

9.4. Conclusions

We have entered an age of 'access'.⁸⁹ While new technologies make access to knowledge much easier, they also make the conflicts between intellectual property owners and the public much fiercer. More than fifteen years ago, Lyman Patterson proposed to put in copyright law two types of rights: the public's rights and authors'

⁸⁸ For the relationship between trademark creativity and the common, see Ochoa, 'Origins and Meanings of the Public Domain', p. 220. Gordon argues that trademark protection should not result in the loss of expressive power, which needs to use trademark for purposes of satire or cultural reference. Gordon, 'A Property Right in Self-Expression', p. 1537.

⁸⁹ To borrow a book name from Jeremy Rifkin. See Jeremy Rifkin, *The Age of Access: The New Culture of Hypercapitalism, Where all of Life is a Paid-For Experience*, London: Penguin, 2000.

rights.⁹⁰ According to this chapter, these two types of rights could be understood as the rights of accessing knowledge and the rights of deserving reward. Both of them are demanded by justice.

The vital thing is balance. The purpose of knowledge, i.e., the use of knowledge, should be maximized by enhancing access to knowledge while knowledge creativity must be sufficiently rewarded. Access to knowledge cannot be satisfied by merely maintaining a robust and free common. Accessing new knowledge is more important for the purpose of improving the public interest. Sometimes, the common should be propertized to some degree so as to make access easier. In addition, because knowledge creativity is fundamental to the provision of more and better knowledge for the public to use, knowledge creators should be sufficiently stimulated. A key point at present is to reduce obstructions generated from overprotection of intellectual property rights. Any reasonable methods that can provide sufficient reward for creativity and meanwhile maximize access to knowledge should be employed. For rights associated with knowledge creativity, it is the notion of ‘reward’ that we should turn to for justifications.

In this regard, intellectual property is only a mean to the end rather than the end itself. Probably we can use the notion of ‘intellectual product rights (IPRs)’ to replace ‘intellectual property rights (IPRs)’. This change does not devalue the important function of intellectual property regimes. It is only a theoretical effort to prevent the improper expansion of intellectual property. In many fields, well-designed intellectual property laws must continue to prevail. Perhaps we will never be able to find solutions better than intellectual property. But the process of making efforts per se is valuable, during which we may repeatedly witness the realization of a Confucian adage -- endless creativity and improvement.

⁹⁰ L. Ray Patterson & Stanley W. Lindberg, *The Nature of Copyright: A Law of Users' Rights*, Athens: The University of Georgia Press, 1991, p. 5.

CHAPTER TEN

Conclusion: What Should Intellectual Property Be?

*Although...formulation scarcely resolves concrete cases,
it provides the 'beginning of wisdom'.*

– Joseph McDonald ¹

We swam across the historical and theoretical river of intellectual property, from the immensity of the mind to the cutting edge of some crucial legal issues of this objective world. We have dived into the meanings, essences and functions of various intricate facets of knowledge. Now we shall return to the places where we prepared to plunge.

At the beginning of this thesis, I provided a brief review of the current hot debates on global intellectual property issues as well as China's role in the relevant discourse. Intellectual property is, in today's world, widely viewed as a threat to the public interest in using knowledge. As many Western scholars have argued, a theoretical reason accounting for the unreasonable expansion and overprotection of intellectual property is that traditional intellectual property theories such as Lockean theory and incentive theory put more emphases on appropriation than on the public interest. This phenomenon, as has been commonly suggested, is rooted in the historical particularities of sixteenth-eighteenth century Europe where guild monopoly had played a fundamental role in shaping our modern understanding of intellectual property.

I feel it necessary to glean some diverse inspirations from China's intellectual property history, which so far has been dominated by William Alford's arguments that view Chinese tradition as being hostile to intellectual property. To do so, I have addressed three research questions:

10.1. The research questions revisited:

- Can we have a better understanding of pre-modern China's intellectual property history and the relevant issues?

¹ David Nimmer, "Fairest of Them All" and Other Fairy Tales of Fair Use', 66 *Law & Contemp. Probs.* 263 (2003), p. 287.

- What can be added to the current understanding of Lockean intellectual property theory from a re-examination of pre-modern China's intellectual property history?
- Based on the re-examination of history, can we develop some new perspectives on intellectual property theories, especially by using some elements of Chinese philosophy?

10.2. China's intellectual property history and its philosophical implications

- Can we have a better understanding of pre-modern China's intellectual property history and the relevant issues?

Several methodologies were developed at the beginning of this thesis to provide new perspectives to examine China's history and culture. They enabled us to take into account a substantial amount of historical data which can be found from various academic fields such as the studies of history, culture, economy and science and technology. They also helped us to argue that pre-modern China's political and legal institutions had not fundamentally and overwhelmingly stifled the advent of proto-intellectual property practice.

Creativity played a fundamental and crucial role in traditional China, despite the fact that respecting the past was also viewed as important. Creativity was even construed by Confucianism as the nature of the universe, which requires individuals to actively participate in its creative process. The Chinese notion of creativity impeded little the emergence of proto-intellectual property and, in some cases such as copyright, it even accelerated legal protection.

The most active catalyst for the emergence of proto-intellectual property in China was the commercialization of knowledge products. Intellectual property represented by exclusive rights granted to knowledge producers was viewed as being legitimized both culturally and legally because it was an inevitable choice of the development of commodity economy and technological changes, in which the non-rivalrous and non-excludable nature of knowledge made the application of intellectual property regimes a must.

These findings, which are entirely different from those of Alford, are not limited to reminding us that contemporary China's piracy problem has complicated economic and political reasons² and is not necessarily associated with Chinese culture and history. If our examination stops here, the only conclusion will be that intellectual property is an eternal idea.³ This conclusion will lead to the deification of intellectual property and a disaster for the public interest, which are so concerned about by the current academic debates.

Therefore, in addition to the above findings, I extended the 'historical probe' to observe intellectual property in a broader social context. This thesis has shown that the emergence and development of proto-intellectual property models in China were not associated with guild monopoly. In a relatively non-monopolistic atmosphere, tremendous efforts were made to encourage free printing, technology transfer and various incentive models so as to effectively promote education, health, living conditions, continuous creativity and so on. Taking into consideration the Chinese desire of creativity, we can argue that it is likely that the Chinese realized -- at least subconsciously -- that knowledge creation and dissemination are both important to the continuous improvement of our society.

- What can be added to the current understanding of Lockean intellectual property theory from the perspectives of a re-examination of pre-modern China's intellectual property history?

The situation in pre-modern Europe was largely similar to that in China: proto-intellectual property practices emerged in tune with the commercialization of knowledge products; alternative models such as patronage and reward existed; the importance of disseminating knowledge into society was clearly realized and legally supported. However, there is a major difference: the absolute monopoly power enjoyed by the English and French publishing guilds is unique. When religious and political censorship became rigorous in the sixteenth century, Europe turned to develop intellectual property towards an increasingly monopolistic end. This divergence was far-reaching: it put the public interest to great disadvantage and eventually resulted in the advent of the Lockean justification of intellectual property, which favours strong property rights.

² In fact, Alford frequently emphasized the importance of jointly examining the cultural, political and economic aspects when studying history. However, as Anna Han criticized, Alford only examined culture when studying China's intellectual property history. Anna M. Han, 'To Steal a Book is an Elegant Offense: Intellectual Property Law in Chinese Civilization', 36 *Santa Clara L. Rev.* 1265 (1996).

³ Frank D. Prager, 'The Early Growth and Influence of Intellectual Property', 34 *Journal of the Patent Office Society* 106 (1952), p. 106.

The problem with the Lockean theory is that it mistakenly finds the justification for intellectual works in a ‘knowledge creation -- property’ logic, which inevitably views creative knowledge as the property of its creator and shows little enthusiasm for justifying the public interest in using knowledge. Lockean theory is often used together with the incentive theory, which, too, inclines to positively theorize the propertization of knowledge and relatively neglect an equal philosophical foundation of the public interest.

A comparative study of the historical evolution of intellectual property in pre-modern China and Europe goes far beyond criticizing Alford’s arguments. It adds to the current debates on the justice of intellectual property a new perspective. It raises the essential question of why human society cannot think about intellectual property merely from the ‘knowledge creation -- property’ logic.

- Based on the re-examinations of history, can we develop some new perspectives on intellectual property theories, especially by using some elements of Chinese philosophy?

This thesis then tried to relocate the theoretical ‘starting point’ of intellectual property from ‘knowledge creation -- property’ to the investigation of the purpose, role and nature of knowledge *itself* to see why protecting the interest of both knowledge creators and knowledge users have been practically proved to be equally important throughout human history.

I took an epistemological approach to examine this question. It started from an empirical observation of the objective imperfectness of the world in which mankind lives. The subjective reason for such imperfectness as disease, anger and natural disaster can be ascribable to the limited perceptive ability of the human brain, which naturally prevents us to understand deeply the existing world. However, the human brain has a positive function to perceive and in turn create new knowledge to overcome the imperfectness. The epistemological perspective has two significances: first, the ultimate purpose of having knowledge is to use it; second, the fundamental role of knowledge creativity is to provide better knowledge for the public to use.

This thesis further argued that knowledge use and knowledge creativity have an inherently inter-nutritional and inter-conflicting nature. On the one hand, furthering

creativity is subject to the limited perceptive ability of the human brain and therefore requires a rich environment of cumulative knowledge, which can only be achieved by promoting knowledge dissemination; newly created knowledge, when disseminated, will promote better use of knowledge and in turn nourish more creativity. This suggests an inter-nutritional relationship between knowledge use and knowledge creativity. On the other hand, due to the non-rivalrous and non-excludable nature of knowledge, uncontrolled knowledge use can result in free riding and market failure and heavily stifle attempts to invest in creating new knowledge; however, controls such as intellectual property regimes may restrict access to new knowledge as well as further creativity. In this regard, it seems that the relationship between knowledge use and knowledge creativity is inter-conflicting.

The inherent inter-nutritional and inter-conflicting nature of knowledge resembles a Chinese ontological concept of ‘polarity’. First, both polarity and knowledge are abstract or intangible and contain two inherently opposing but complementary elements interacting with each other within a symbiotic organism. Second, the interaction of knowledge creation and use is the same as the circular movement of the polarity: the completion of a new creation is likely to be the threshold of dissemination and use while the completion of the dissemination and use is likely to be a very beginning of creativity. Third, the interaction between knowledge creation and use can result in knowledge expansion when they mutually nourish each other, and shrink if they mutually conflict too much. Therefore, balance, which maximizes reciprocities and reduces conflicts, is vital.

The epistemological approach is suggestive to understanding intellectual property in a broad social context. Because the ultimate purpose of knowledge is using knowledge and knowledge creativity plays a fundamental role in improving the public use of knowledge, creativity must be sufficiently rewarded and in many cases stimulated while the use of knowledge, or the ‘access to knowledge (A2K)’, must be maximized. To reduce their inter-conflicts, it is vital to keep a balance between sufficiently rewarding creativity and maximizing the access to knowledge. It seems that intellectual property *per se* should be viewed as an instrument rather than the purpose. It is better to replace the intellectual property regime with a combination of systems based on two categories of rights, *i.e.*, ‘the rights of accessing knowledge’ and ‘the rights of deserving reward’, in which both intellectual property and other alternative models operate.

Access to knowledge is not limited to accessing the amount of knowledge that belongs to the common or is beyond the protection of intellectual property laws. New knowledge

must also be reasonably and effectively accessible. There are three types of access to knowledge: material use such as wearing cloths and taking medicine; intellectual use such as learning skills to become an apprentice and reading a novel for entertainment; creative use, *i.e.*, using knowledge for the purpose of further creativity. The reward argument proposed here focuses only on the creative values provided by knowledge creators. It justifies intellectual property but does not self-evidently follow the adoption of intellectual property. Nor is it necessarily associated with labour. Any reasonable methods that can provide sufficient reward and meanwhile maximize access to knowledge should be employed. The rights of accessing knowledge and the rights of deserving reward need to be balanced and are both demanded by justice.

The epistemological approach transcends the traditional sphere of intellectual property. It provides a firm theoretical support to the public interest but does not necessarily devalue the importance of knowledge creativity and intellectual property protection. It is an effort to prevent the improper expansion of intellectual property, which is likely to threaten the public interest in using knowledge. In many fields, however, well-designed intellectual property laws must continue to prevail.

10.3. Conclusions

China's history and culture is one of the valuable sources from which we can glean experience, lessons and inspirations for today and future. However, this is not to defend contemporary China's piracy problems, for which China should apologize. A healthier market order must be established to regulate the flow of intellectual goods, albeit merely following the US's understanding of strong intellectual property should continue to be criticized.

China might want to 'apologize' for some antiquated historical episodes. The earliest one can be dated back to around 552 AD when two monks, under the commission of Roman emperor Justinian, secretly took silkworms from China to Constantinople with their lives being potentially threatened under Chinese laws.⁴ Despite such desperate actions, as pointed out by a government report of France in 1763, Chinese silk techniques were in

⁴ René Étiemble, *L'Europe Chinoise*, Paris: Gallimard, 1989. For its Chinese version, see *Zhongguo wenhua xichuan ouzhou shi (History of the Cultural Transmission from China to Europe)*, trans. by Geng Sheng, Beijing: Shangwu yinshu guan, 2000, p. 65. The story was told by the Byzantine historian Prokopios (active from 520 AD to 560 AD ca.). Claudio Zanier, *Where the Roads Met: East and West in the Silk Production Processes, 17th to 19th Century*, Kyoto: Italian School of East Asian Studies, 1994, p. 12.

some aspects still seen as definitely superior to European ones. Efforts were being made at the highest political level in the West to acquire them, particularly because the Nanjing white silk had become so rare at that time and the price had become so high. Two Chinese young men were trained in France as Catholic missionaries but with special knowledge of French silk manufacturing. They were subsequently sent back to China in 1765 with detailed and secret instructions to report back to Bertin and Turgot, among many other things, on the state of Chinese arts and manufactures. Unfortunately, their spying mission was scarcely successful.⁵

As a matter of fact, during a long period of time, the European had been totally unable to ‘steal’ the secrets of Chinese inventions and had to purchase them expensively from Arab merchants. Since the sixteenth century, the history of the European porcelain industry had been marked by arduous attempts to imitate the inscrutable decorations and manufacturing processes of Chinese porcelain. It was not until 1709 that the great German alchemist Johann Friedrich Böttger invented beautiful Europe-made porcelain, which however was still nowhere near the level of its Chinese counterpart.⁶

Bearing in mind China’s other important inventions such as paper, printing and gunpowder, had China generously exchanged its inventive ideas with the Near East and Europe as it did with Korea and Japan, the entire process of human history might have been dramatically accelerated. China’s stories, even if not the lengthy arguments provided by this thesis but merely China’s history of ‘stinginess’ – therefore deserve more attentions.

There are many questions left untouched. One of the most interesting ones is that of to what extent knowledge creativity and knowledge use can help human society to overcome the imperfectness of this world. Since the twentieth century, our modern society has created vast quantities of new knowledge to launch world wars, destroy the natural environment and demoralize our spirits. Can we say that these issues are only relevant to philosophy and religion and should not be the concern of legal studies in general and the design of knowledge management systems in particular?

This question and many others may be too disturbing to be thought about at the moment because we have an immediate urge to dig into the crucial practical issues of how to get to the balance point or how to design an exquisite system of knowledge management.

⁵ Zanier, *Where the Roads Met*, pp. 16-18.

⁶ Étiemble, *L'Europe Chinoise* (Chinese version), pp. 523-24.

These issues are extremely worthy of exploring but I think I had better leave them for a while to many erudite experts who have been desperately seeking answers.

APPENDIX 1

History Timeline of China’s Dynasties *

Dates	Dynasty
ca. 2000-1500 B.C.	Xia
1700-1027 B.C.	Shang
1027-771 B.C.	Western Zhou
770-221 B.C.	Eastern Zhou
	770-476 B.C. -- Spring and Autumn period
	475-221 B.C. -- Warring States period
221-207 B.C.	Qin
206 B.C.-A.D. 9	Western Han
A.D. 9-24	Xin (Wang Mang interregnum)
A.D. 25-220	Eastern Han
A.D. 220-280	Three Kingdoms
	220-265 -- Wei
	221-263 -- Shu
	229-280 -- Wu
A.D. 265-316	Western Jin
A.D. 317-420	Eastern Jin

* This table is provided by Chaos Group at Maryland (http://www-chaos.umd.edu/history/time_line.html) (last visited 5th December 2006).

A.D. 420-588	Southern and Northern Dynasties	
	420-588	Southern Dynasties
		420-478 -- Song
		479-501 -- Qi
		502-556 -- Liang
		557-588 -- Chen
	386-588	Northern Dynasties
		386-533 -- Northern Wei
		534-549 -- Eastern Wei
		535-557 -- Western Wei
		550-577 -- Northern Qi
		557-588 -- Northern Zhou
A.D. 581-617	Sui	
A.D. 618-907	Tang	
A.D. 907-960	Five Dynasties	
	907-923 -- Later Liang	
	923-936 -- Later Tang	
	936-946 -- Later Jin	
	947-950 -- Later Han	
	951-960 -- Later Zhou	

A.D. 907-979	Ten Kingdoms
A.D. 960-1279	Song
	960-1127 -- Northern Song
	1127-1279 -- Southern Song
A.D. 916-1125	Liao
A.D. 1038-1227	Western Xia
A.D. 1115-1234	Jin
A.D. 1279-1368	Yuan
A.D. 1368-1644	Ming
A.D. 1644-1911	Qing

APPENDIX 2

A Note about Translation

In this research, all Chinese and Japanese names appear with family name preceding given name, except for a few Chinese authors whose names follow the Western style. The conventional transliterations for Japanese are used. Chinese romanization of *pinyin* system is used for relevant Chinese concepts and translations. Many Chinese texts are translated by the author.

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